

**INITIATION**

**A LA GESTION DES FICHIERS**

**EXCEL**

**EN LOTUS SCRIPT**



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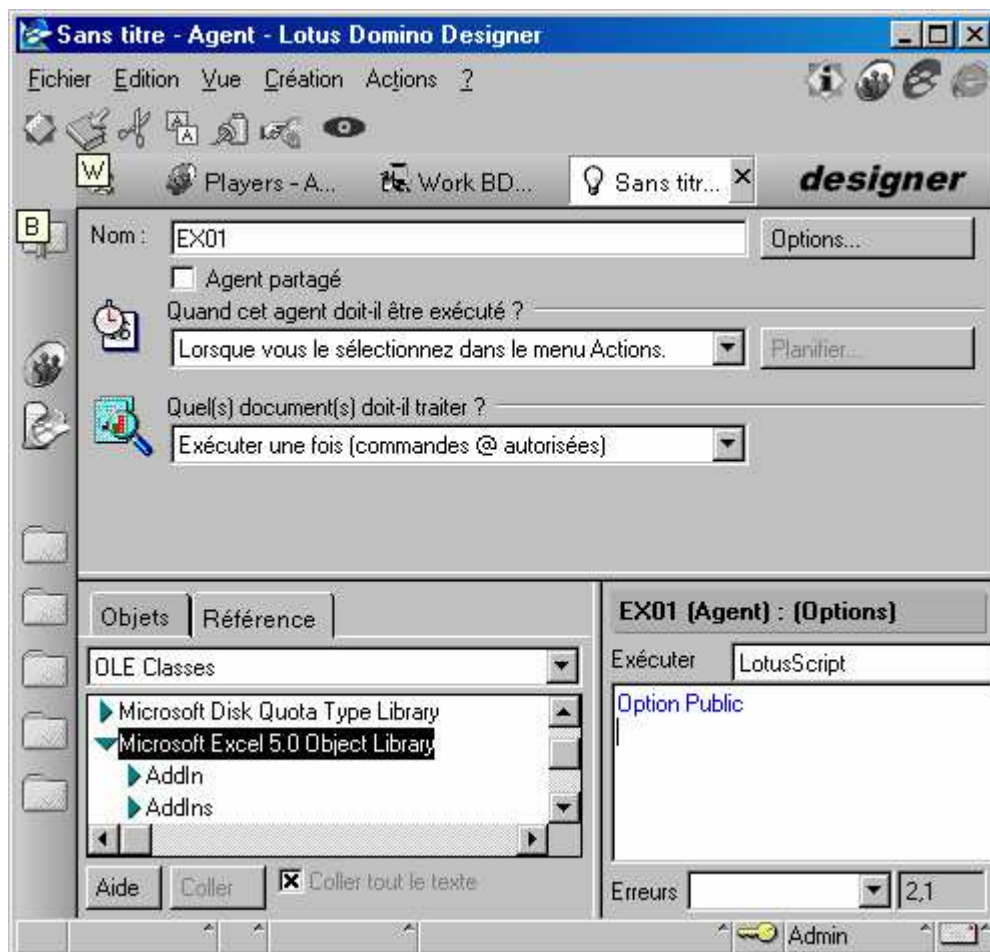
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## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

### PRELABLE

Il suffit simplement que Excel soit installé sur le poste. De la même manière, si vous êtes amené à développer des agents batch chargés d'exporter des données sur Excel, il faut que ce dernier soit installé sur le serveur.

Au moment de votre développement et par mesures de précaution, veuillez aussi vérifier que les objets Excel soient accessibles par Lotus Script. Pour cela une classe OLE se rapportant à Excel doit être disponible comme par exemple :



# 1 EXPORTER DES DONNEES VERS EXCEL

## 1.1 INITIALISATION ET FERMETURE DE LA SESSION EXCEL

### Sub Initialize

#### Dim XLApp As Variant

'// Initialisation de l'objet OLE ou Instance OLE

'// Ouverture de l'application Excel sans ouverture de classeur

**Set XLApp = CreateObject("Excel.Application")**

**If XLApp is Nothing then**

**Msgbox "Impossible d'ouvrir Excel"**

**Exit Sub**

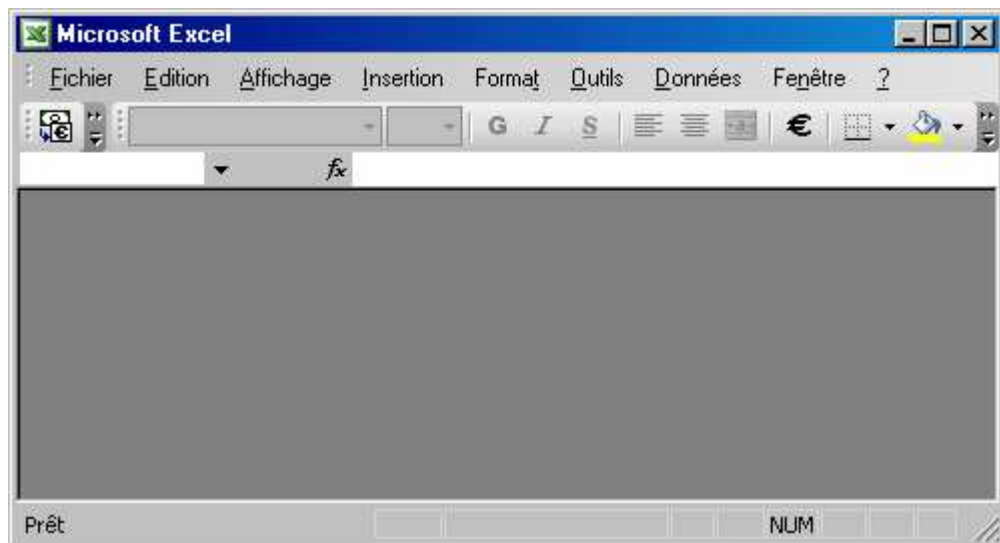
**End If**

'// Fermeture de l'application Excel

**XLApp.Quit**

### End Sub

Nous venons tout simplement d'ouvrir l'application Excel et de la fermer. Cela revient à faire :



Puis **Fichier/Quitter** afin de fermer l'application.

☞ Il peut être également judicieux de contrôler la création de l'objet Excel par **If XLApp is Nothing ...**

### 1.2 CREATION D'UN CLASSEUR VIERGE

A l'issue de l'ouverture de l'application, nous ne disposons pas encore de classeur dans lequel on pourra y insérer nos informations. Nous allons donc faire l'équivalent de **Fichier/Nouveau**. Par défaut le classeur comporte 3 feuilles.

Cette opération se traduit en Lotus Script de la manière suivante :

```
Dim XLWorkbook As Variant
Set XLWorkbook=XLApp.Workbooks.Add
```

### 1.3 ACTIVATION DE LA FEUILLE DE TRAVAIL

Il faut ensuite indiquer sur quelle feuille Excel l'agent va devoir travailler.

```
'// Classeur actif
Set ActiveWorkBook=XLApp.ActiveWorkBook
'// Feuille active
Set Sheet=ActiveWorkBook.ActiveSheet
```

Sheet aurait pu aussi se définir par

```
Set Sheet = XLApp.ActiveWorkBook.ActiveSheet
```

### 1.4 ACCEDER AUX CELLULES

L'accès aux cellules s'effectue à partir de :

- L'application
- Classeur actif
- De la feuille active
- Et l'ensemble des cellules disponibles

On devrait donc les référencer de la manière suivante :  
XLApp.**ActiveWorkBook.ActiveSheet.Cells**

Nous venons de recréer toute l'arborescence pour enfin pouvoir accéder à une cellule ou plage de cellules.

Nous pouvons simplifier cette syntaxe par :

```
Dim Cellule as variant
Set Cellule=Sheet.Cells
```

## 1.5 NOTRE PREMIER AGENT AU COMPLET

### Sub Initialize

```
Dim XLApp As Variant
Dim XLWorkBook As Variant
Dim ActiveWorkBook As Variant
Dim Sheet As Variant
Dim Cellule As Variant
'// Initialisation de l'objet OLE ou Instance OLE
'// Ouverture de l'application Excel sans ouverture de classeur
Set XLApp = CreateObject("Excel.Application")
'// Création d'un classeur
Set XLWorkBook=XLApp.Workbooks.Add
'// Classeur actif
Set ActiveWorkBook=XLApp.ActiveWorkBook
'// Feuille active
Set Sheet=ActiveWorkBook.ActiveSheet
'// Fermeture de l'application Excel
'// Définition de la plage de cellules accessible
Set Cellule=Sheet.Cells
// Fermeture
XLApp.Quit
End Sub
```

Cet agent fonctionne parfaitement et il se contente d'ouvrir un classeur vierge et de le fermer.

## 1.6 ECRIRE DANS UNE CELLULE

L'adressage d'une cellule s'effectue en ligne et en colonne. Par le biais de l'objet **Sheet** on dispose de la méthode `Cells(Ligne, Colonne)` permettant de renseigner une cellule. Ligne et Colonne doivent être de type **Long**.

Exemple :

```
Call Sheet.Cells(1,1)="Premier essai"
Nous venons de renseigner la cellule A1.
```

`Sheet.Cells(1,1).Value="Premier essai"` est aussi une syntaxe admise.

## 1.7 SAUVEGARDE DE LA FEUILLE EXCEL

Notre agent devient donc :

Sub Initialize

```
Dim XLApp As Variant
Dim XLWorkBook As Variant
Dim ActiveWorkBook As Variant
Dim Sheet As Variant
Dim Cellule As Variant
On Error Goto Erreur
'// Initialisation de l'objet OLE ou Instance OLE
'// Ouverture de l'application Excel sans ouverture de classeur
Set XLApp = CreateObject("Excel.Application")
'// Création d'un classeur
Set XLWorkBook=XLApp.Workbooks.Add
'// Classeur actif
Set ActiveWorkBook=XLApp.ActiveWorkBook
'// Feuille active
Set Sheet=ActiveWorkBook.ActiveSheet
'// Ecriture dans une cellule
Sheet.Cells(1,1)="Premier essai"
'// Fermeture de l'application Excel
XLApp.Quit
Exit Sub
```

Erreur:

```
XLApp.Quit
Resume Fin
```

Fin:

End Sub

Si nous le l'exécutons dans cet état nous obtiendrons le message suivant :



## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Nous disposons de deux méthodes équivalentes à Fichier/Enregistrer et Fichier/Enregistrer sous :

```
XLApp.ActiveWorkbook.Save
```

```
XLApp.ActiveWorkbook.SaveAs NomDeFichier
```

Agent :

```
Sub Initialize
```

```
...
```

```
...
```

```
'// Ecriture dans une cellule
```

```
Sheet.Cells(1,1)="Premier essai"
```

```
'// Fermeture de l'application Excel
```

```
XLApp.ActiveWorkbook.SaveAs "c:\alpha\export.xls"
```

```
'// On ferme le classeur, c'est plus propre
```

```
ActiveWorkBook.Close
```

```
'// On quitte l'application
```

```
XLApp.Quit
```

```
Exit Sub
```

Erreur:

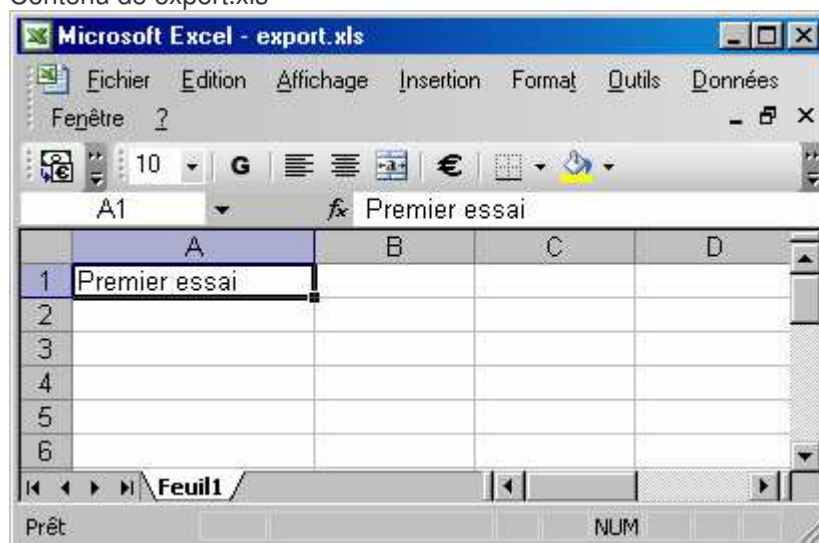
```
XLApp.Quit
```

```
Resume Fin
```

Fin:

```
End Sub
```

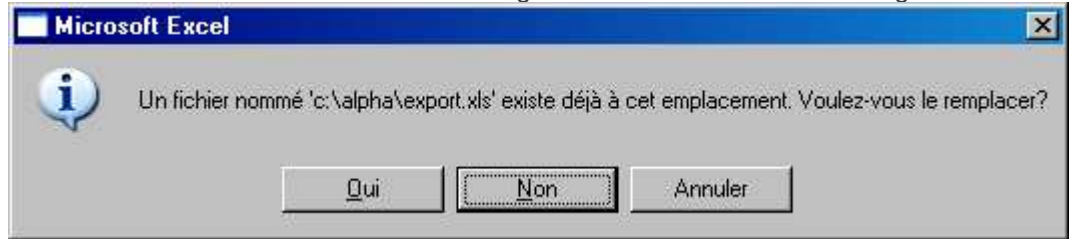
Contenu de export.xls





## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Si nous exécution une nouvelle fois notre agent nous obtiendrons le message suivant



Afin de se prémunir contre l'envoi de ce message nous disposons de la propriété **DisplayAlerts**.

```
Sub Initialize
```

```
...
```

```
XLApp.DisplayAlerts = False
```

```
XLApp.ActiveWorkbook.SaveAs "c:\alpha\export.xls"
```

```
'// On ferme le classeur, c'est plus propre
```

```
ActiveWorkBook.Close
```

```
XLApp.Quit
```

```
Exit Sub
```

```
Erreur:
```

```
XLApp.Quit
```

```
Resume Fin
```

```
Fin:
```

```
End Sub
```

Le fichier sera donc remplacé et la boîte de dialogue d'avertissement ne sera plus affichée, ce qui est le but recherché.

### 1.8 AFFICHER LA FEUILLE EXCEL PENDANT LES TRAITEMENTS

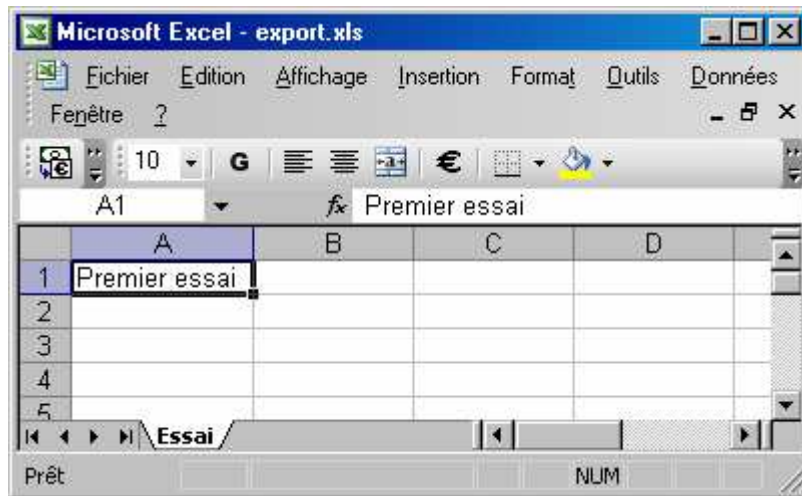
L'application Excel dispose pour ceci de la propriété Visible.

```
XLApp.Visible = True/False
```

Cette opération peut être intéressante pour montrer le déroulement du traitement à l'utilisateur ; cependant cette option ralentit légèrement les temps de traitements.

## 1.9 NOMMER LA FEUILLE EXCEL

Sheet.Name = "Essai"



## 1.10 DEPOSER UN MESSAGE DANS LA BARRE STATUT PENDANT LE TRAITEMENT

XLApp.StatusBar = "Traitement en cours...."

## 2 UN EXPORT COMPLET

Nous disposons de tous les éléments nécessaires à la réalisation d'exportation (chapitre 1).

En effet il est nécessaire :

- D'ouvrir une session Excel
- De créer un nouveau classeur
- De rendre active une feuille Excel (par défaut feuille n°1)
- Parcourir une vue afin d'insérer dans chaque cellule les champs d'un document.
- Et en fin de traitement sauvegarder la feuille Excel et fermer l'application.

### DESCRIPTION DE LA BASE D'EXEMPLE

La base sur laquelle portera l'export contient le masque ci-dessous :

## Player Profile

Number:	Number T
Name:	Name T
Position:	Position T
Age:	Age #
Where born:	Born T

Body T
--------

Cette base comporte également une vue "By number". A partir de celle-ci nous allons parcourir tous les documents et les exporter vers une feuille Excel.

### SOURCE DE L'AGENT

Sub Initialize

```

Dim session As NotesSession
Dim db As NotesDatabase
Dim view As NotesView
Dim doc As NotesDocument
Dim XLApp As Variant
Dim XLWorkBook As Variant
Dim ActiveWorkBook As Variant
Dim Sheet As Variant
Dim Cellule As Variant
    
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

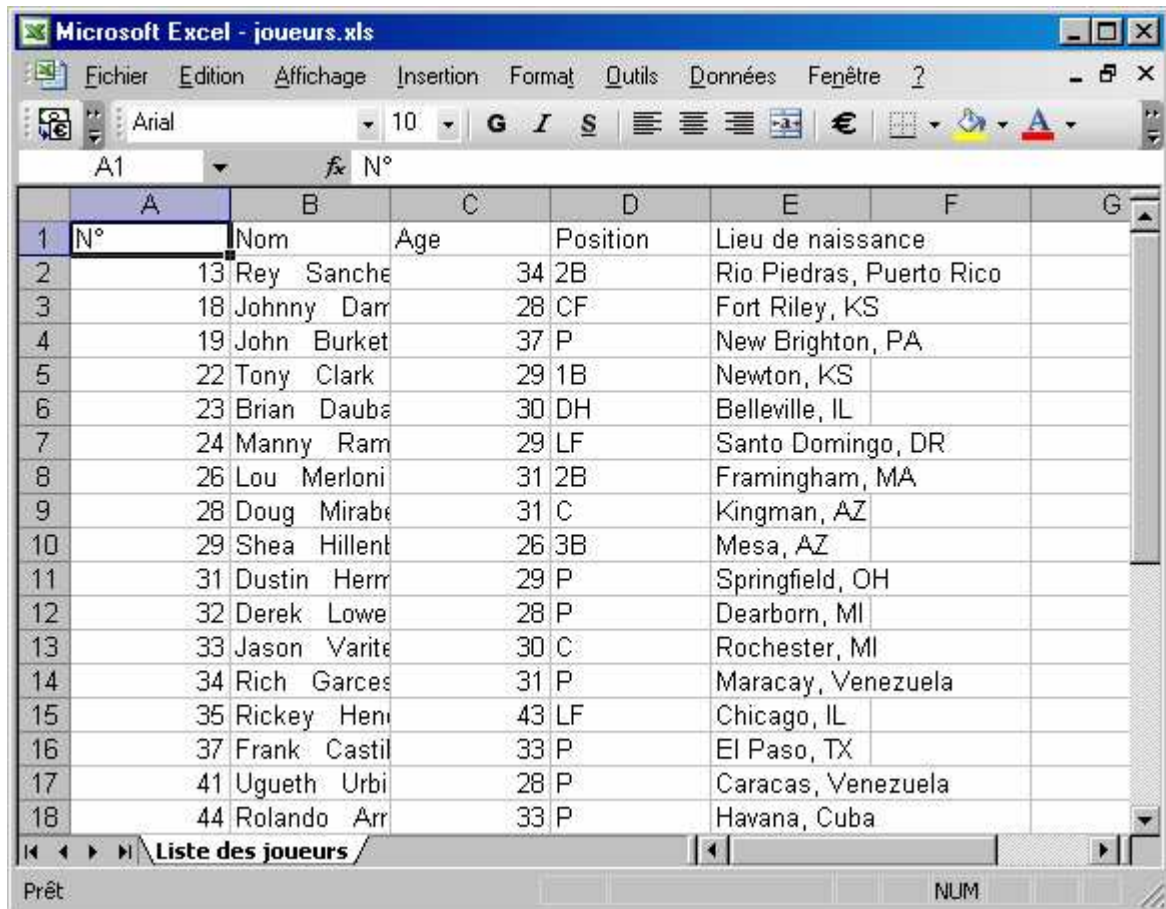
```
Dim colonne As Long
Dim ligne As Long
On Error Goto Erreur
'// Initialisation de la session, base actuelle et vue
Set session=New NotesSession
Set db = session.CurrentDatabase
Set view = db.GetView("By number")
'// Initialisation de l'objet OLE ou Instance OLE
'// Ouverture de l'application Excel sans ouverture de classeur
Set XLApp = CreateObject("Excel.Application")
XLApp.Visible = True
XLApp.DisplayAlerts = False
XLApp.StatusBar = "Traitement en cours...."
Set XLWorkBook=XLApp.Workbooks.Add
Set ActiveWorkBook=XLApp.ActiveWorkBook
Set Sheet=ActiveWorkBook.ActiveSheet
Sheet.Name = "Liste des joueurs"
'// Ecriture des titres de colonnes*
ligne=1
Sheet.Cells(Ligne,1)="N°"
Sheet.Cells(Ligne,2)="Nom"
Sheet.Cells(Ligne,3)="Age"
Sheet.Cells(Ligne,4)="Position"
Sheet.Cells(Ligne,5)="Lieu de naissance"
'// Balayage de la vue
Set doc = view.GetFirstDocument
Do While Not (doc Is Nothing)
    ligne = ligne +1
    Sheet.Cells(Ligne,1)=doc.Number(0)
    Sheet.Cells(Ligne,2)=doc.Name(0)
    Sheet.Cells(Ligne,3)=doc.Age(0)
    Sheet.Cells(Ligne,4)=doc.Position(0)
    Sheet.Cells(Ligne,5)=doc.Born(0)
    Set doc = view.GetNextDocument(doc)
Loop
XIApp.ActiveWorkbook.SaveAs "c:\alpha\joueurs.xls"
ActiveWorkBook.Close
XLApp.Quit
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Exit Sub
Erreur:
    XLApp.Quit
Resume Fin
Fin:
End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Cet export génère le fichier Excel suivant :



	A	B	C	D	E	F	G
1	N°	Nom	Age	Position	Lieu de naissance		
2	13	Rey Sanchez	34	2B	Rio Piedras, Puerto Rico		
3	18	Johnny Damon	28	CF	Fort Riley, KS		
4	19	John Burkett	37	P	New Brighton, PA		
5	22	Tony Clark	29	1B	Newton, KS		
6	23	Brian Daubert	30	DH	Belleville, IL		
7	24	Manny Ramirez	29	LF	Santo Domingo, DR		
8	26	Lou Merloni	31	2B	Framingham, MA		
9	28	Doug Mirabello	31	C	Kingman, AZ		
10	29	Shea Hillenbrand	26	3B	Mesa, AZ		
11	31	Dustin Hermanson	29	P	Springfield, OH		
12	32	Derek Lowe	28	P	Dearborn, MI		
13	33	Jason Varitek	30	C	Rochester, MI		
14	34	Rich Garces	31	P	Maracay, Venezuela		
15	35	Rickey Henderson	43	LF	Chicago, IL		
16	37	Frank Castillo	33	P	El Paso, TX		
17	41	Ugueth Urbina	28	P	Caracas, Venezuela		
18	44	Rolando Arrarola	33	P	Havana, Cuba		

### INTERVENIR SUR LA PRESENTATION DE LA FEUILLE EXCEL PRODUITE

Cet export est déjà très opérationnel. Cependant il est possible d'intervenir sur la présentation de la feuille :

- Mettre en gras et souligner la ligne de titre
- Justifier automatiquement la largeur des colonnes
- Etc..

#### METTRE EN GRAS ET SOULIGNER

Cette mise en forme s'applique à toute la ligne. On détermine la plage de cellule sur laquelle on souhaite travailler.

```
XLApp.Rows("1:1").Select
```

```
XLApp.Selection.Font.Bold = True
```

```
XLApp.Selection.Font.Underline = True
```

#### METHODES DE SELECTION

Nous pouvons aussi sélectionner une cellule par son adresse directe :

```
XLApp.Range("A1").Select
```

```
ou une plage XLApp.Range("A1:D10").Select
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

### CALCULER AUTOMATIQUEMENT LA LARGEUR DES COLONNE

Sheet.Columns.**AutoFit**

Cette action est à effectuer une fois l'exportation terminée.

### AGENT CORRIGE

Sub Initialize

...

...

**XLApp.Rows("1:1").Select**

**XLApp.Selection.Font.Bold = True**

**XLApp.Selection.Font.Underline = True**

'// Balayage de la vue

Set doc = view.GetFirstDocument

Do While Not (doc Is Nothing)

    ligne = ligne + 1

    Sheet.Cells(Ligne,1)=doc.Number(0)

    Sheet.Cells(Ligne,2)=doc.Name(0)

    Sheet.Cells(Ligne,3)=doc.Age(0)

    Sheet.Cells(Ligne,4)=doc.Position(0)

    Sheet.Cells(Ligne,5)=doc.Born(0)

    Set doc = view.GetNextDocument(doc)

Loop

**Sheet.Columns.AutoFit**

XLApp.ActiveWorkbook.SaveAs "c:\alpha\joueurs.xls"

ActiveWorkBook.Close

XLApp.Quit

Exit Sub

Erreur:

    XLApp.Quit

    Resume Fin

Fin:

End Sub

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

### SELECTION DYNAMIQUE EN FONCTION DU NOMBRE DE LIGNES ET DE COLONNES

Pendant le traitement ligne est incrémenté de 1 à chaque lecture, il est donc facile de construire une sélection dynamique.

```
XLApp.Range(Sheet.Cells(1,1), Sheet.Cells(ligne,5)).Select
```

```
Sub Initialize
```

```
...
```

```
Loop
```

```
XLApp.Range(Sheet.Cells(1,1), Sheet.Cells(ligne,5)).Select
```

```
XLApp.Selection.Font.Name = "Arial"
```

```
XLApp.Selection.Font.Size = 9
```

```
XLApp.Selection.Columns.AutoFit
```

```
XLApp.ActiveWorkbook.SaveAs "c:\alpha\joueurs.xls"
```

```
ActiveWorkBook.Close
```

```
XLApp.Quit
```

```
Exit Sub
```

```
Erreur:
```

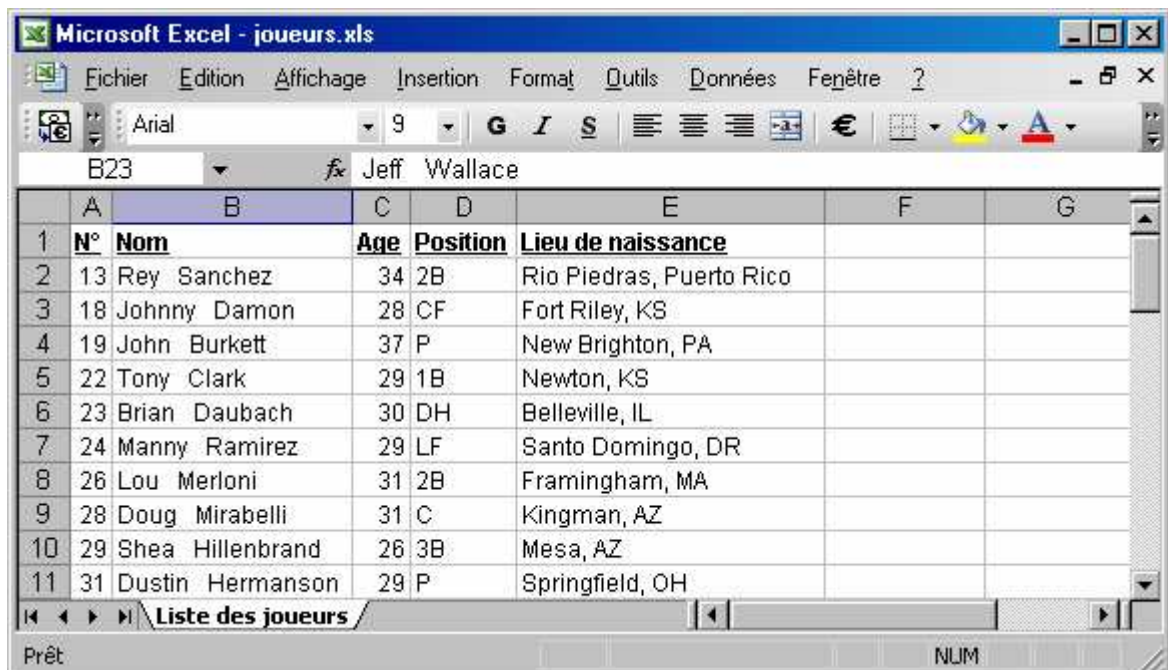
```
XLApp.Quit
```

```
Resume Fin
```

```
Fin:
```

```
End Sub
```

Présentation :



The screenshot shows a Microsoft Excel window titled "Microsoft Excel - joueurs.xls". The spreadsheet contains a table with 11 rows and 5 columns. The columns are labeled "N°", "Nom", "Age", "Position", and "Lieu de naissance". The data is as follows:

	A	B	C	D	E	F	G
1	N°	Nom	Age	Position	Lieu de naissance		
2	13	Rey Sanchez	34	2B	Rio Piedras, Puerto Rico		
3	18	Johnny Damon	28	CF	Fort Riley, KS		
4	19	John Burkett	37	P	New Brighton, PA		
5	22	Tony Clark	29	1B	Newton, KS		
6	23	Brian Daubach	30	DH	Belleville, IL		
7	24	Manny Ramirez	29	LF	Santo Domingo, DR		
8	26	Lou Merloni	31	2B	Framingham, MA		
9	28	Doug Mirabelli	31	C	Kingman, AZ		
10	29	Shea Hillenbrand	26	3B	Mesa, AZ		
11	31	Dustin Hermanson	29	P	Springfield, OH		



### MISE EN PAGE

Nous allons maintenant mettre un entête et un pied de page et imprimer en mode paysage :

#### **With XLApp.Worksheets(1)**

```
'// 1 en mode portrait, 2 en mode paysage
    .PageSetup.Orientation = 2
    .PageSetup.CenterHeader = "Liste des joueurs"
    .PageSetup.RightFooter = "Page : &P"
    .PageSetup.CenterFooter = "Saison 2005"
End With
XLApp.ActiveWorkbook.SaveAs "c:\alpha\joueurs.xls"
ActiveWorkBook.Close
XLApp.Quit
Exit Sub

Erreur:
    XLApp.Quit
Resume Fin

Fin:
End Sub
```

Vous remarquerez aussi une autre manière de sélectionner une feuille XLApp.Worksheets(1). On accède en effet à la feuille 1 du classeur. Nous aurions pu aussi écrire **With sheet** au lieu de **With XLApp.Worksheets(1)**

En fait, **Worksheets** est un tableau contenant les feuilles qui composent le classeur.

De la même manière la feuille Sheet peut se déclarer :

```
Set xlsheet = xlApp.Workbooks(1).Worksheets(1)
```

**Workbooks** est un tableau contenant l'ensemble des classeurs ouverts.

### IMPRIMER LA FEUILLE

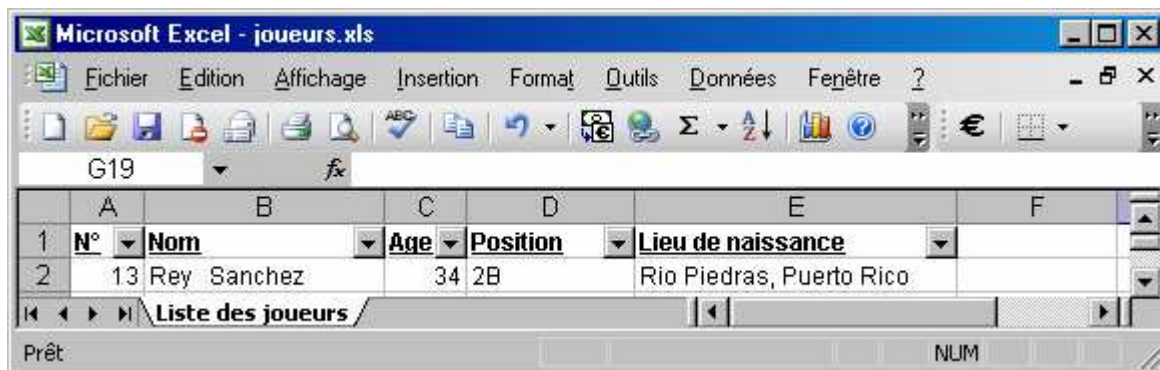
```
Sheet.PrintOut
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

### POSITIONNER DES FILTRES

Ici nous positionnons des filtres sur la première ligne.

```
Sheet.Range("1:1").AutoFilter
```



### MODIFIER LA LARGEUR D'UNE COLONNE

On passe la colonne 2 à 25

```
Sheet.Columns(2).ColumnWidth=25
```

### MODIFIER LA HAUTEUR D'UNE LIGNE

On passé la ligne 1 à 15

```
Sheet.Rows(1).RowHeight=15
```

## 3 IMPORTER UNE FEUILLE EXCEL

Les préalables sont identiques à ceux du chapitre 1. Il faut également ouvrir et fermer une session Excel comme démontré au § 1.1.

### 3.1 ACCES ET OUVERTURE DE LA FEUILLE EXCEL

Après avoir initialisé la session Excel nous devons donc ouvrir le classeur.

Pour ouvrir un classeur nous appelons la méthode **Open** de l'objet **XLApp.workbooks** soit **XLApp.workbooks.Open NomDuFichier**.

Exemple **XLApp.workbooks.Open "C:\ALPHA\EXPORT.XLS"**.

Nous pouvons cependant contracter cette syntaxe :

```
Set XLWorkBook=XLApp.workbooks
```

```
XLWorkBook.Open "C:\ALPHA\EXPORT.XLS"
```

### 3.2 ACCES A UNE CELLULE ET LECTURE

Nous allons comme dans l'exportation activer notre feuille Excel par défaut :

```
Set ActiveWorkBook=XLApp.ActiveWorkBook
```

```
Set Sheet=ActiveWorkBook.ActiveSheet
```

```
Set Cellule=Sheet.Cells
```

Pour récupérer le contenu d'une cellule nous utilisons la propriété **Value** et les coordonnées **Ligne** et **Colonne** de l'objet cellule.

**Cellule(1,1).Value** : renvoie le contenu de la cellule A1.

Exemple :

```
Sub Initialize
```

```
...
```

```
Set XLApp = CreateObject("Excel.Application")
```

```
XLApp.Visible = True
```

```
XLApp.DisplayAlerts = False
```

```
Set XLWorkBook=XLApp.workbooks
```

```
XLWorkBook.Open "C:\ALPHA\EXPORT.XLS"
```

```
Set ActiveWorkBook=XLApp.ActiveWorkBook
```

```
Set Sheet=ActiveWorkBook.ActiveSheet
```

```
Set Cellule=Sheet.Cells
```

```
Msgbox Cellule(1,1).Value
```

```
ActiveWorkBook.Close
```

```
XLApp.Quit
```

```
Exit Sub
```

Erreur:

XLApp.Quit

Resume Fin

Fin:

End Sub

### 3.3 DETECTER LA FIN DU FICHIER EXCEL

Il s'agit en fait de détecter une "fin de fichier" de la même manière qu'un fichier texte. Nous devons donc tester si une cellule est vide et arrêter le traitement dès que celle-ci est rencontrée.

Bien entendu, le fichier Excel ne doit pas comporter de lignes vierges.

Nous utiliserons tout simplement la fonction Lotus Script IsEmpty.

```
IsEmpty(Cellule(Ligne,Colonne).Value)
```

### 3.4 LECTURE D'UNE FEUILLE EXCEL

Nous disposons à présent de tous les éléments pour importer notre feuille (celle créée au chapitre 2).

#### Sub Initialize

```
Dim session As NotesSession
```

```
Dim db As NotesDatabase
```

```
Dim doc As NotesDocument
```

```
Dim XLApp As Variant
```

```
Dim XLWorkBook As Variant
```

```
Dim ActiveWorkBook As Variant
```

```
Dim Sheet As Variant
```

```
Dim Cellule As Variant
```

```
Dim colonne As Long
```

```
Dim ligne As Long
```

```
On Error Goto Erreur
```

```
'// Initialisation de la session, base actuelle et vue
```

```
Set session=New NotesSession
```

```
Set db = session.CurrentDatabase
```

```
'// Initialisation de l'objet OLE ou Instance OLE
```

```
'// Ouverture de l'application Excel sans ouverture de classeur
```

```
Set XLApp = CreateObject("Excel.Application")
```

```
XLApp.Visible = True
```

```
XLApp.DisplayAlerts = False
```

```
Set XLWorkBook=XLApp.workbooks
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
XLWorkBook.Open "C:\ALPHA\JOUEURS.XLS"  
Set ActiveWorkBook=XLApp.ActiveWorkBook  
Set Sheet=ActiveWorkBook.ActiveSheet  
Set Cellule=Sheet.Cells  
Ligne=2  
Colonne=1  
Do While Not Isempty(Cellule(Ligne,Colonne).Value)  
    For Colonne=1 To 5  
        Print Cellule(Ligne,Colonne).Value  
    Next  
    Colonne = 1  
    Ligne=Ligne + 1  
Loop  
ActiveWorkBook.Close  
XLApp.Quit  
Exit Sub  
Erreur:  
    XLApp.Quit  
Resume Fin  
Fin:  
End Sub
```

---

## 4 UNE CLASSE LOTUS SCRIPT POUR RESUMER

### 4.1 EXPORT

```
Sub Initialize
```

```
    Const xlUnderlineStyleSingle = 2
    Dim session As NotesSession
    Dim db As NotesDatabase
    Dim view As NotesView
    Dim doc As NotesDocument
    Dim colonne As Long
    Dim ligne As Long
    Dim XLApp As Variant
    Dim WorkBook As Variant
    Dim ActiveWorkBook As Variant
    Dim Sheet As Variant
    Dim ee As ExcelExport
    Dim s As Variant
    On Error Goto Erreur
    '// Initialisation de la session, base actuelle et vue
    Set session=New NotesSession
    Set db = session.CurrentDatabase
    Set view = db.GetView("By number")
    '// Initialise l'objet
Set ee = New ExcelExport()
'// On récupère ses propriétés
Set XLApp=ee.GetXLApp
Set Sheet=ee.GetSheet
Set WorkBook=ee.GetXLWorkBook
Set ActiveWorkBook=ee.GetActiveWorkBook
ee.DisplayAlerts=False
'// On nomme la feuille
Call ee.SetSheetName("Liste des joueurs")
    Ligne=1
    '// Titre à la ligne 1
Call ee.SetFontCells(ligne,2,"Comic Sans MS")
Call ee.SetFontCells(ligne,4,"Comic Sans MS")
Call ee.BoldCells(ligne,2,True)
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Call ee.BoldCells(ligne,4,True)
Call ee.ItalicCells(ligne,2,True)
Call ee.ItalicCells(ligne,4,True)
Call ee.FontSizeCells(ligne,2,12)
Call ee.FontSizeCells(ligne,4,12)
Call ee.SetCellule(Ligne,2,"LISTE DES JOUEURS")
Call ee.SetCellule(Ligne,4,"SAISON 2005")
'// titre des colonnes
ligne=3
Call ee.SetCellule(Ligne,1,"N°")
Call ee.SetCellule(Ligne,2,"Nom")
Call ee.SetCellule(Ligne,3,"Age")
Call ee.SetCellule(Ligne,4,"Position")
Call ee.SetCellule(Ligne,5,"Lieu de naissance")
'// Première méthode
' Call ee.BoldRows("3:3",True)
' Call ee.ItalicRows("3:3",True)
' Call ee.UnderLineRows("3:3",xlUnderlineStyleSingle)
'// Seconde méthode
XLApp.Rows("3:3").Select
XLApp.Selection.Font.Bold = True
XLApp.Selection.Font.Underline = True
'// Balayage de la vue
'// On commence à écrire à la ligne 4
Set doc = view.GetFirstDocument
Do While Not (doc Is Nothing)
    ligne = ligne + 1
    Call ee.SetCellule(Ligne,1,doc.Number(0))
    Call ee.SetCellule(Ligne,2,doc.Name(0))
    Call ee.SetCellule(Ligne,3,doc.Age(0))
    Call ee.SetCellule(Ligne,4,doc.Position(0))
    Call ee.SetCellule(Ligne,5,doc.Born(0))
    Set doc = view.GetNextDocument(doc)
Loop
'// Autofit première méthode
Call ee.Autofit
'// Mise en forme par la sélection de cellule
XLApp.Range(Sheet.Cells(3,1), Sheet.Cells(ligne,5)).Select
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
XLApp.Selection.Font.Name = "Arial"  
XLApp.Selection.Font.Size = 9  
'// Autre méthode et contraction de la sélection  
Set s=XLApp.Selection  
s.Font.Name = "Arial"  
s.Font.Size = 9  
'// Autofit deuxième méthode  
xlApp.Selection.Columns.AutoFit  
'// Mise en page première méthode  
With XLApp.Worksheets(1)  
    .PageSetup.Orientation = 2  
    .PageSetup.CenterHeader = "Liste des joueurs"  
    .PageSetup.RightFooter = "Page : &P"  
    .PageSetup.CenterFooter = "Saison 2005"  
End With  
'// Largeur spécifique  
Call ee.WidthColumns("B",25)  
Call ee.RowHeight(1,25)  
'// Sauvegarde de la feuille  
ee.SaveAs "c:\alpha\joueurs.xls"  
'// On ferme tout  
ee.CloseActiveWorkBook  
ee.CloseSession  
Exit Sub  
Erreur:  
    MsgBox "Erreur " & Err & " " & Error$ & " ligne " & Erl  
    ee.CloseSession  
Resume Fin  
Fin:  
End Sub
```



## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

<b>LISTE DES JOUEURS</b>		<b>SAISON 2005</b>		
<b>N°</b>	<b>Nom</b>	<b>Age</b>	<b>Position</b>	<b>Lieu de naissance</b>
13	Rey Sanchez	34	2B	Rio Piedras, Puerto Rico
18	Johnny Damon	28	CF	Fort Riley, KS
19	John Burkett	37	P	New Brighton, PA
22	Tony Clark	29	1B	Newton, KS
23	Brian Daubach	30	DH	Belleville, IL
24	Manny Ramirez	29	LF	Santo Domingo, DR
26	Lou Merloni	31	2B	Framingham, MA
28	Doug Mirabelli	31	C	Kingman, AZ
29	Shea Hillenbrand	26	3B	Mesa, AZ
31	Dustin Hermanson	29	P	Springfield, OH
32	Derek Lowe	28	P	Dearborn, MI
33	Jason Varitek	30	C	Rochester, MI
34	Rich Garces	31	P	Maracay, Venezuela
35	Rickey Henderson	43	LF	Chicago, IL
37	Frank Castillo	33	P	El Paso, TX
41	Ugueth Urbina	28	P	Caracas, Venezuela
44	Rolando Arrojo	33	P	Havana, Cuba
45	Pedro Martinez	30	P	Managuayabo, DR
46	Calvin Pickering	25	1B	St. Thomas, Virgin Islands
47	Sun-Woo Kim	24	P	Inchon, South Korea
49	Tim Wakefield	35	P	Melbourne, FL
55	Jeff Wallace	26	P	Wheeling, WV
58	Bry Nelson	28	2B	Crossett, AR
63	Paxton Crawford	24	P	Little Rock, AR

## 4.2 IMPORT

```
Sub Initialize
    Dim session As NotesSession
    Dim db As NotesDatabase
    Dim view As NotesView
    Dim doc As NotesDocument
    Dim ei As ExcelImport
    Dim colonne As Long
    Dim ligne As Long
    On Error Goto Erreur
    '// Initialisation de la session, base actuelle et vue
    Set session=New NotesSession
    Set db = session.CurrentDatabase
    Set view = db.GetView("By number")
    '// Initialisation de l'objet OLE ou Instance OLE
    Set ei=New ExcelImport()
    Call ei.OpenWorkBook("C:\ALPHA\JOUEURS.XLS")
    Ligne=4
    Colonne=1
    Do While Not Isempty(ei.GetCellule(Ligne,Colonne))
        For Colonne=1 To 5
            Print ei.GetCellule(Ligne,Colonne)
        Next
        Colonne = 1
        Ligne=Ligne + 1
    Loop
    ei.CloseActiveWorkBook
    ei.CloseSession
    Exit Sub
Erreur:
    MsgBox "Erreur " & Err & " " & Error$ & " ligne " & Erl
    ei.CloseSession
    Resume Fin
Fin:
End Sub
```

### 4.3 CLASSE LOTUSSCRIPT

Cette classe est déjà bien développée, elle est cependant perfectible et je vous laisse le soin de la compléter en y ajoutant des nouvelles propriétés et méthodes.

Pour ceci je vous invite à consulter l'aide VBA Excel.

```

=====
====
// Ensemble de classes pour la gestion des fichiers sous Excel
// - Exportation
// - Importation
//=====
====

Public Class ExcelSession
    Private XLApp As Variant
    Private XLWorkBook As Variant
    Private ActiveWorkBook As Variant
    Private Sheet As Variant
    Private Cells As Variant

    Property Get GetXLApp As Variant
        Set GetXLApp=XLApp
    End Property

    Property Get GetXLWorkBook As Variant
        Set GetXLWorkBook=XLWorkBook
    End Property

    Property Get GetActiveWorkBook As Variant
        Set GetActiveWorkBook=ActiveWorkBook
    End Property

    Property Get GetSheet As Variant
        Set GetSheet=Sheet
    End Property

    Property Get GetCells As Variant
        Set GetCells=Cellule
    End Property

    Property Set visible As Integer
        XLApp.Visible = visible
    End Property

    Property Set DisplayAlerts As Integer
        XLApp.DisplayAlerts = DisplayAlerts
    End Property

    Property Set StatusBar As String
        XLApp.StatusBar = StatusBar
    End Property

    Sub new
        Set XLApp = CreateObject("Excel.Application")
        If XLApp Is Nothing Then
            Error 9999, "Impossible d'initier la session Excel"
        End If
    End Sub
End Class

```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Private Sub Init
    Set ActiveWorkBook=XLApp.ActiveWorkBook
    If ActiveWorkBook Is Nothing Then
        Error 9999, "Impossible d'initier le classeur actif"
    End If
    Set Sheet=ActiveWorkBook.ActiveSheet
    If Sheet Is Nothing Then
        Error 9999, "Impossible d'initier la feuille active"
    End If
End Sub

Sub CloseActiveWorkBook
    On Error Resume Next
    ActiveWorkBook.Close
    If Err Then
        Error 9999, "Impossible de fermer le classeur en cours"
    End If
End Sub

Sub CloseSession
    On Error Resume Next
    XLApp.Quit
    If Err Then
        Error 9999, "Impossible de fermer la session Excel"
    End If
End Sub

End Class
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
// -----  
// Exportation d'une feuille Excel  
// -----  
  
Public Class ExcelExport As ExcelSession  
  
    Sub new  
        Set XLWorkBook=XLApp.Workbooks.Add  
        If XLWorkBook Is Nothing Then  
            Error 9999, "Impossible d'initier le classeur"  
  
        End If  
        Call Init  
    End Sub  
  
    // -----  
    // Ecriture dans une cellule  
    // -----  
    Sub SetCellule(Ligne As Long, colonne As Long, v As Variant)  
        On Error Resume Next  
        Sheet.Cells(Ligne,Colonne)=v  
        If Err Then  
            Error 9999, "Impossible de modifier la cellule " & L & ":" & c  
        End If  
    End Sub  
  
    // -----  
    // Nommer une feuille  
    // -----  
    Sub SetSheetName(n As String)  
        sheet.name=n  
    End Sub  
  
    // -----  
    // Filtres automatiques  
    // -----  
    Sub AutoFilter (RangeArea As String)  
        Sheet.Range(RangeArea).AutoFilter  
    End Sub  
  
    // -----  
    // Largeur colonne, hauteur ligne  
    // -----  
  
    // Largeur automatique des colonnes  
    Sub AutoFit  
        Sheet.Columns.AutoFit  
    End Sub  
  
    //--- Largeur d'une colonne ---  
    Sub WidthColumns( C As String, Trigger As Integer)  
        Sheet.Columns(C).ColumnWidth=Trigger  
    End Sub  
  
    //--- Hauteur d'une ligne  
    Sub RowHeight( L As Variant, Trigger As Variant)  
        Sheet.Rows(L).RowHeight=Trigger  
    End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
// -----  
// Gestion des fontes  
// -----  
  
'-- Gestion des fontes  
Sub SetFontRows(L As Variant, Trigger As String)  
    Sheet.Rows(L).Font.Name=Trigger  
End Sub  
  
Sub SetFontColumns(C As String, Trigger As String)  
    Sheet.Columns(C).Font.Name=Trigger  
End Sub  
  
Sub SetFontRange(Area As String, Trigger As String)  
    Sheet.Range(Area).Font.Name=Trigger  
End Sub  
  
Sub SetFontCells(L As Long, C As Long, Trigger As String)  
    Sheet.Cells(L,C).Font.Name=Trigger  
End Sub  
  
// -----  
// Formatage des cellules  
// -----  
  
Sub SetNumberFormatRows(L As Variant, Trigger As String)  
    Sheet.Rows(L).NumberFormat=Trigger  
End Sub  
  
Sub SetNumberFormatColumns(C As String, Trigger As String)  
    Sheet.Columns(C).NumberFormat=Trigger  
End Sub  
  
Sub SetNumberFormatRange(Area As String, Trigger As String)  
    Sheet.Range(Area).NumberFormat=Trigger  
End Sub  
  
Sub SetNumberFormatCells(L As Long, C As Long, Trigger As String)  
    Sheet.Cells(L,C).NumberFormat=Trigger  
End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
// -----  
// Alignement des cellules  
// -----  
  
'--- Alignement vertical ---  
' xIVAlignBottom, xIVAlignCenter, xIVAlignDistributed, xIVAlignJustify, xIVAlignTop  
  
Sub VerticalAlignementRows(L As Variant, Trigger As Variant)  
    Sheet.Rows(L).VerticalAlignment=Trigger  
End Sub  
  
Sub VerticalAlignementColumns(C As String, Trigger As Variant)  
    Sheet.Columns(C).VerticalAlignment=Trigger  
End Sub  
  
Sub VerticalAlignementRange(Area As String, Trigger As Variant)  
    Sheet.Range(Area).VerticalAlignment=Trigger  
End Sub  
  
Sub VerticalAlignementCells(L As Long, C As Long, Trigger As Variant)  
    Sheet.Cells(L,C).VerticalAlignment=Trigger  
End Sub  
  
'--- Alignement horizontal --  
' xIHALignCenter, xIHALignDistributed, xIHALignJustify, xIHALignLeft, or  
xIHALignRight  
  
Sub HorizontalAlignementRows(L As Variant, Trigger As Variant)  
    Sheet.Rows(L).HorizontalAlignment=Trigger  
End Sub  
  
Sub HorizontalAlignementColumns(C As String, Trigger As Variant)  
    Sheet.Columns(C).HorizontalAlignment=Trigger  
End Sub  
  
Sub HorizontalAlignementRange(Area As String, Trigger As Variant)  
    Sheet.Range(Area).HorizontalAlignment=Trigger  
End Sub  
  
Sub HorizontalAlignementCells(L As Long, C As Long, Trigger As Variant)  
    Sheet.Cells(L,C).HorizontalAlignment=Trigger  
End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
// -----  
// Gestion des bordures  
// -----  
  
// --- type de trait (s) ---  
' // xlContinuous, xlDash, xlDashDot,xlDashDotDot, xlDot, xlDouble,  
xlLineStyleNone ou xlSlantDashDot  
// --- Epaisseur (w) ---  
' xlHairline, xlThin, xlMedium ou xlThick  
Sub StyleBorderRange (Areas As String, s As Variant, w As Variant)  
  
    With Sheet.Range(Areas).Borders  
        .LineStyle=s  
        .Weight = w  
    End With  
End Sub  
  
Sub StyleBorderColumns (C As String, s As Variant, w As Variant)  
  
    With Sheet.Columns(C).Borders  
        .LineStyle=s  
        .Weight = w  
    End With  
End Sub  
  
Sub StyleBorderRows (L As Variant, s As Variant, w As Variant)  
  
    With Sheet.Rows(L).Borders  
        .LineStyle=s  
        .Weight = w  
    End With  
End Sub  
  
Sub StyleBorderCells (L As Integer, C As Integer, s As Variant, w As Variant)  
  
    With Sheet.Cells(L,C).Borders  
        .LineStyle=s  
        .Weight = w  
    End With  
End Sub
```



## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
// -----  
// Mise en forme des cellules (gras, souligné, italic)  
// -----  
  
'--- Taille de la fonte ---  
Sub FontSizeRows(L As Variant, Trigger As Integer)  
    Sheet.Rows(L).Font.Size=Trigger  
End Sub  
  
Sub FontSizeColumns(C As String, Trigger As Integer)  
    Sheet.Columns(C).Font.Size=Trigger  
End Sub  
  
Sub FontSizeRange(Area As String, Trigger As Integer)  
    Sheet.Range(Area).Font.Size=Trigger  
End Sub  
  
Sub FontSizeCells(L As Long, C As Long, Trigger As Integer)  
    Sheet.Cells(L,C).Font.Size=Trigger  
End Sub  
  
// --- Soulignement d'une ligne ---  
// xlUnderlineStyleNone, xlUnderlineStyleSingle, xlUnderlineStyleDouble,  
xlUnderlineStyleSingleAccounting  
// xlUnderlineStyleDoubleAccounting  
Sub UnderLineRows(L As Variant, u As Long)  
    Sheet.Rows(L).Font.Underline=u  
End Sub  
  
Sub UnderLineCells(L As Long, C As Long, u As Long)  
    Sheet.Cells(L,C).Font.Underline=u  
End Sub  
  
Sub UnderLineColumns(C As String, u As Long)  
    Sheet.Columns(C).Font.Underline=u  
End Sub  
  
Sub UnderLineRange(Area As String, u As Long)  
    Sheet.Range(Area).Font.Underline=u  
End Sub  
  
//--- Italic d'une ligne ---  
Sub ItalicRows(L As Variant, Trigger As Integer)  
    Sheet.Rows(L).Font.Italic=Trigger  
End Sub  
  
Sub ItalicColumns(C As String, Trigger As Integer)  
    Sheet.Columns(C).Font.Italic=Trigger  
End Sub  
  
Sub ItalicRange(Area As String, Trigger As Integer)  
    Sheet.Range(Area).Font.Italic=Trigger  
End Sub  
  
Sub ItalicCells(L As Long, C As Long, Trigger As Integer)  
    Sheet.Cells(L,C).Font.Italic=Trigger  
End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
//--- Gras d'une ligne ---
Sub BoldRows(L As Variant, Trigger As Integer)
    Sheet.Rows(L).Font.Bold=Trigger
End Sub

Sub BoldColumns(C As String, Trigger As Integer)
    Sheet.Columns(C).Font.Bold=Trigger
End Sub

Sub BoldCells(L As Long, C As Long, Trigger As Integer)
    Sheet.Cells(L, C).Font.Bold=Trigger
End Sub

Sub BoldRange(Area As String, Trigger As Integer)
    Sheet.Range(Area).Font.Bold=Trigger
End Sub

'--- Retour à la ligne automatique ---
Sub WrapColumns( C As String, Trigger As Integer)
    Sheet.Columns(C).WrapText=Trigger
End Sub

Sub WrapRows( L As Variant, Trigger As Integer)
    Sheet.Rows(L).WrapText=Trigger
End Sub

Sub WrapRange( Area As String, Trigger As Integer)
    Sheet.Range(Area).WrapText=Trigger
End Sub

Sub WrapCells( L As Long, C As Long, Trigger As Integer)
    Sheet.Cells(L,C).WrapText=Trigger
End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
'// -----  
'// Mise en page de la feuille Excel et impression  
'// -----  
  
'// Orientation de la feuille  
Sub SetOrientation(o As Integer)  
    Sheet.PageSetup.Orientation = o  
End Sub  
  
'// Entête et bas de page  
Sub PageSetup(header As String, footer As String)  
    With sheet  
        .PageSetup.centerheader = header  
        .Pagesetup.RightFooter = "Page : &P"  
        .Pagesetup.CenterFooter = footer  
    End With  
End Sub  
  
'// Mise en page détaillée  
Sub SetLeftHeader (trigger As String)  
    Sheet.PageSetup.LeftHeader = Trigger  
End Sub  
Sub SetCenterHeader (trigger As String)  
    Sheet.PageSetup.CenterHeader = Trigger  
End Sub  
Sub SetRightHeader (trigger As String)  
    Sheet.PageSetup.RightHeader = Trigger  
End Sub  
Sub SetLeftFooter (trigger As String)  
    Sheet.PageSetup.LeftFooter = Trigger  
End Sub  
Sub SetCenterFooter (trigger As String)  
    Sheet.PageSetup.CenterFooter = Trigger  
End Sub  
Sub SetRightFooter (trigger As String)  
    Sheet.PageSetup.RightFooter = Trigger  
End Sub  
'/-- nb page en hauteur  
Sub SetFitToPagesTall(trigger As Integer)  
    sheet.PageSetup.Zoom = False  
    Sheet.PageSetup.FitToPagesTall=Trigger  
End Sub  
  
'/-- nb page en largeur  
Sub SetFitToPagesWide(trigger As Integer)  
    sheet.PageSetup.Zoom = False  
    sheet.PageSetup.FitToPagesWide=trigger  
End Sub  
  
'/-- entête de colonne  
Sub SetPrintTitleColumns(Area As String)  
    sheet.PageSetup.PrintTitleColumns=Areas  
End Sub  
  
'/-- entête de ligne  
Sub SetPrintTitleRows(Areas As String)  
    Sheet.PageSetup.PrintTitleRows=Areas  
End Sub
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
//--- centrage horizontal
Sub SetCenterHorizontally(trigger As Integer)
    Sheet.PageSetup.CenterHorizontally=trigger
End Sub

//--- centrage vertical
Sub SetCenterCenterVertically(trigger As Integer)
    Sheet.PageSetup.CenterVertically=trigger
End Sub

// Définir le bloc d'impression
Sub SetPrintArea (Area As String)
    Sheet.PageSetup.PrintArea = Area
End Sub

// Impression en mode brouillon
Sub SetPrintDraft (trigger As Integer)
    Sheet.PageSetup.Draft = Trigger
End Sub

//--- imprimer la feuille
Sub PrintSheet
    Sheet.PrintOut
End Sub

// -----
// Mise en page de la feuille Excel et impression
// -----

//--- Sauvegarde de la feuille ---
Sub SaveAs(FileName As String)
    XIApp.ActiveWorkbook.SaveAs FileName
    If Err Then
        Error 9999, "Impossible de sauvegarder le classeur " &
filename
    End If
End Sub

//--- sauvegarde
Sub Save
    On Error Resume Next
    If isEcho Then Print "Sauvegarde du fichier"
    XIApp.ActiveWorkbook.Save
    If Err Then
        Error 9999, "Impossible de sauvegarder le classeur"
    End If
End Sub

End Class
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
// -----  
// Importation d'une feuille Excel  
// -----  
  
Public Class ExcellImport As ExcelSession  
  
    Sub new  
        Set XLWorkBook=XLApp.workbooks  
  
        If XLWorkBook Is Nothing Then  
            Error 9999, "Impossible d'initier le classeur"  
  
        End If  
    End Sub  
  
    Sub OpenWorkBook(filename As String)  
        On Error Resume Next  
        XLWorkBook.Open filename  
        If Err Then  
            Error 9999, "Impossible d'ouvrir le fichier " & filename  
        End If  
        Call init  
        Set Cells=Sheet.Cells  
    End Sub  
  
    Function GetCellule(L As Long, C As Long) As Variant  
        GetCellule=Cells(L,C).Value  
    End Function  
End Class
```

## 4.4 LISTE DES CONSTANTES EXCEL

Const xl24HourClock = 33  
 Const xl3DArea = -4098  
 Const xl3DAreaStacked = 78  
 Const xl3DAreaStacked100 = 79  
 Const xl3DBar = -4099  
 Const xl3DBarClustered = 60  
 Const xl3DBarStacked = 61  
 Const xl3DBarStacked100 = 62  
 Const xl3DColumn = -4100  
 Const xl3DColumnClustered = 54  
 Const xl3DColumnStacked = 55  
 Const xl3DColumnStacked100 = 56  
 Const xl3DEffects1 = 13  
 Const xl3DEffects2 = 14  
 Const xl3DLine = -4101  
 Const xl3DPie = -4102  
 Const xl3DPieExploded = 70  
 Const xl3DSurface = -4103  
 Const xl4DigitYears = 43  
 Const xlA1 = 1  
 Const xlAbove = 0  
 Const xlAbsolute = 1  
 Const xlAbsRowRelColumn = 2  
 Const xlAccounting1 = 4  
 Const xlAccounting2 = 5  
 Const xlAccounting3 = 6  
 Const xlAccounting4 = 17  
 Const xlAdd = 2  
 Const xlAddIn = 18  
 Const xlAll = -4104  
 Const xlAllAtOnce = 2  
 Const xlAllChanges = 2  
 Const xlAllExceptBorders = 6  
 Const xlAllFaces = 7  
 Const xlAlternateArraySeparator = 16  
 Const xlAnd = 1  
 Const xlAnyGallery = 23  
 Const xlArea = 1  
 Const xlAreaStacked = 76  
 Const xlAreaStacked100 = 77  
 Const xlArrangeStyleCascade = 7  
 Const xlArrangeStyleHorizontal = -4128  
 Const xlArrangeStyleTiled = 1  
 Const xlArrangeStyleVertical = -4166  
 Const xlArrowHeadLengthLong = 3  
 Const xlArrowHeadLengthMedium = -4138  
 Const xlArrowHeadLengthShort = 1  
 Const xlArrowHeadStyleClosed = 3  
 Const xlArrowHeadStyleDoubleClosed = 5  
 Const xlArrowHeadStyleDoubleOpen = 4  
 Const xlArrowHeadStyleNone = -4142  
 Const xlArrowHeadStyleOpen = 2  
 Const xlArrowHeadWidthMedium = -4138  
 Const xlArrowHeadWidthNarrow = 1  
 Const xlArrowHeadWidthWide = 3  
 Const xlAscending = 1  
 Const xlAutoActivate = 3  
 Const xlAutoClose = 2

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlAutoDeactivate = 4  
Const xlAutoFill = 4  
Const xlAutomatic = -4105  
Const xlAutomaticScale = -4105  
Const xlAutomaticUpdate = 4  
Const xlAutoOpen = 1  
Const xlAverage = -4106  
Const xlAxis = 21  
Const xlAxisCrossesAutomatic = -4105  
Const xlAxisCrossesCustom = -4114  
Const xlAxisCrossesMaximum = 2  
Const xlAxisCrossesMinimum = 4  
Const xlAxisTitle = 17  
Const xlBackgroundAutomatic = -4105  
Const xlBackgroundOpaque = 3  
Const xlBackgroundTransparent = 2  
Const xlBar = 2  
Const xlBarClustered = 57  
Const xlBarOfPie = 71  
Const xlBarStacked = 58  
Const xlBarStacked100 = 59  
Const xlBelow = 1  
Const xlBetween = 1  
Const xlBidi = -5000  
Const xlBidiCalendar = 3  
Const xlBIFF = 2  
Const xlBitmap = 2  
Const xlBlanks = 4  
Const xlBMP = 1  
Const xlBoth = 1  
Const xlBottom = -4107  
Const xlBottom10Items = 4  
Const xlBottom10Percent = 6  
Const xlBox = 0  
Const xlBubble = 15  
Const xlBubble3DEffect = 87  
Const xlBuiltIn = 21  
Const xlButton = 15  
Const xlButtonControl = 0  
Const xlByColumns = 2  
Const xlByRows = 1  
Const xlCalculationAutomatic = -4105  
Const xlCalculationManual = -4135  
Const xlCalculationSemiautomatic = 2  
Const xlCancel = 1  
Const xlCap = 1  
Const xlCascade = 7  
Const xlCategory = 1  
Const xlCategoryScale = 2  
Const xlCellTypeAllFormatConditions = -4172  
Const xlCellTypeAllValidation = -4174  
Const xlCellTypeBlanks = 4  
Const xlCellTypeComments = -4144  
Const xlCellTypeConstants = 2  
Const xlCellTypeFormulas = -4123  
Const xlCellTypeLastCell = 11  
Const xlCellTypeSameFormatConditions = -4173  
Const xlCellTypeSameValidation = -4175  
Const xlCellTypeVisible = 12  
Const xlCellValue = 1

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlCenter = -4108
Const xlCenterAcrossSelection = 7
Const xlCGM = 7
Const xlChangeAttributes = 6
Const xlChart = -4109
Const xlChart4 = 2
Const xlChartArea = 2
Const xlChartAsWindow = 5
Const xlChartInPlace = 4
Const xlChartSeries = 17
Const xlChartShort = 6
Const xlChartTitle = 4
Const xlChartTitles = 18
Const xlCheckBox = 1
Const xlChecker = 9
Const xlChronological = 3
Const xlCircle = 8
Const xlClassic1 = 1
Const xlClassic2 = 2
Const xlClassic3 = 3
Const xlClipboard = 3
Const xlClipboardFormatBIFF = 8
Const xlClipboardFormatBIFF2 = 18
Const xlClipboardFormatBIFF3 = 20
Const xlClipboardFormatBIFF4 = 30
Const xlClipboardFormatBinary = 15
Const xlClipboardFormatBitmap = 9
Const xlClipboardFormatCGM = 13
Const xlClipboardFormatCSV = 5
Const xlClipboardFormatDIF = 4
Const xlClipboardFormatDspText = 12
Const xlClipboardFormatEmbeddedObject = 21
Const xlClipboardFormatEmbedSource = 22
Const xlClipboardFormatLink = 11
Const xlClipboardFormatLinkSource = 23
Const xlClipboardFormatLinkSourceDesc = 32
Const xlClipboardFormatMovie = 24
Const xlClipboardFormatNative = 14
Const xlClipboardFormatObjectDesc = 31
Const xlClipboardFormatObjectLink = 19
Const xlClipboardFormatOwnerLink = 17
Const xlClipboardFormatPICT = 2
Const xlClipboardFormatPrintPICT = 3
Const xlClipboardFormatRTF = 7
Const xlClipboardFormatScreenPICT = 29
Const xlClipboardFormatStandardFont = 28
Const xlClipboardFormatStandardScale = 27
Const xlClipboardFormatSYLK = 6
Const xlClipboardFormatTable = 16
Const xlClipboardFormatText = 0
Const xlClipboardFormatToolFace = 25
Const xlClipboardFormatToolFacePICT = 26
Const xlClipboardFormatVALU = 1
Const xlClipboardFormatWK1 = 10
Const xlClosed = 3
Const xlCodePage = 2
Const xlColor1 = 7
Const xlColor2 = 8
Const xlColor3 = 9
Const xlColorIndexAutomatic = -4105
```



## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlColorIndexNone = -4142  
Const xlColumn = 3  
Const xlColumnClustered = 51  
Const xlColumnField = 2  
Const xlColumnHeader = -4110  
Const xlColumnItem = 5  
Const xlColumnLabels = 2  
Const xlColumns = 2  
Const xlColumnSeparator = 14  
Const xlColumnStacked = 52  
Const xlColumnStacked100 = 53  
Const xlColumnThenRow = 2  
Const xlCombination = -4111  
Const xlCommand = 2  
Const xlCommandUnderlinesAutomatic = -4105  
Const xlCommandUnderlinesOff = -4146  
Const xlCommandUnderlinesOn = 1  
Const xlCommentAndIndicator = 1  
Const xlCommentIndicatorOnly = -1  
Const xlComments = -4144  
Const xlComplete = 4  
Const xlConeBarClustered = 102  
Const xlConeBarStacked = 103  
Const xlConeBarStacked100 = 104  
Const xlConeCol = 105  
Const xlConeColClustered = 99  
Const xlConeColStacked = 100  
Const xlConeColStacked100 = 101  
Const xlConeToMax = 5  
Const xlConeToPoint = 4  
Const xlConsolidation = 3  
Const xlConstant = 1  
Const xlConstants = 2  
Const xlContents = 2  
Const xlContext = -5002  
Const xlContinuous = 1  
Const xlCopy = 1  
Const xlCorner = 2  
Const xlCorners = 6  
Const xlCount = -4112  
Const xlCountNums = -4113  
Const xlCountryCode = 1  
Const xlCountrySetting = 2  
Const xlCreatorCode = 1480803660  
Const xlCrissCross = 16  
Const xlCross = 4  
Const xlCSV = 6  
Const xlCSVMac = 22  
Const xlCSVMSDOS = 24  
Const xlCSVWindows = 23  
Const xlCurrencyBefore = 37  
Const xlCurrencyCode = 25  
Const xlCurrencyDigits = 27  
Const xlCurrencyLeadingZeros = 40  
Const xlCurrencyMinusSign = 38  
Const xlCurrencyNegative = 28  
Const xlCurrencySpaceBefore = 36  
Const xlCurrencyTrailingZeros = 39  
Const xlCurrentPlatformText = -4158  
Const xlCustom = -4114

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlCut = 2  
Const xlCylinder = 3  
Const xlCylinderBarClustered = 95  
Const xlCylinderBarStacked = 96  
Const xlCylinderBarStacked100 = 97  
Const xlCylinderCol = 98  
Const xlCylinderColClustered = 92  
Const xlCylinderColStacked = 93  
Const xlCylinderColStacked100 = 94  
Const xlDash = -4115  
Const xlDashDot = 4  
Const xlDashDotDot = 5  
Const xlDataAndLabel = 0  
Const xlDatabase = 1  
Const xlDataField = 4  
Const xlDataHeader = 3  
Const xlDataItem = 7  
Const xlDataLabel = 0  
Const xlDataLabelsShowBubbleSizes = 6  
Const xlDataLabelsShowLabel = 4  
Const xlDataLabelsShowLabelAndPercent = 5  
Const xlDataLabelsShowNone = -4142  
Const xlDataLabelsShowPercent = 3  
Const xlDataLabelsShowValue = 2  
Const xlDataOnly = 2  
Const xlDataSeriesLinear = -4132  
Const xlDataTable = 7  
Const xlDate = 2  
Const xlDateOrder = 32  
Const xlDateSeparator = 17  
Const xlDay = 1  
Const xlDayCode = 21  
Const xlDayLeadingZero = 42  
Const xlDays = 0  
Const xlDBF2 = 7  
Const xlDBF3 = 8  
Const xlDBF4 = 11  
Const xlDebugCodePane = 13  
Const xlDecimalSeparator = 3  
Const xlDefault = -4143  
Const xlDefaultAutoFormat = -1  
Const xlDelimited = 1  
Const xlDescending = 2  
Const xlDesktop = 9  
Const xlDiagonalDown = 5  
Const xlDiagonalUp = 6  
Const xlDialogActivate = 103  
Const xlDialogActiveCellFont = 476  
Const xlDialogAddChartAutoformat = 390  
Const xlDialogAddinManager = 321  
Const xlDialogAlignment = 43  
Const xlDialogApplyNames = 133  
Const xlDialogApplyStyle = 212  
Const xlDialogAppMove = 170  
Const xlDialogAppSize = 171  
Const xlDialogArrangeAll = 12  
Const xlDialogAssignToObject = 213  
Const xlDialogAssignToTool = 293  
Const xlDialogAttachText = 80  
Const xlDialogAttachToolbars = 323

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlDialogAutoCorrect = 485  
Const xlDialogAxes = 78  
Const xlDialogBorder = 45  
Const xlDialogCalculation = 32  
Const xlDialogCellProtection = 46  
Const xlDialogChangeLink = 166  
Const xlDialogChartAddData = 392  
Const xlDialogChartLocation = 527  
Const xlDialogChartOptionsDataLabels = 505  
Const xlDialogChartOptionsDataTable = 506  
Const xlDialogChartSourceData = 541  
Const xlDialogChartTrend = 350  
Const xlDialogChartType = 526  
Const xlDialogChartWizard = 288  
Const xlDialogCheckboxProperties = 435  
Const xlDialogClear = 52  
Const xlDialogColorPalette = 161  
Const xlDialogColumnWidth = 47  
Const xlDialogCombination = 73  
Const xlDialogConditionalFormatting = 583  
Const xlDialogConsolidate = 191  
Const xlDialogCopyChart = 147  
Const xlDialogCopyPicture = 108  
Const xlDialogCreateNames = 62  
Const xlDialogCreatePublisher = 217  
Const xlDialogCustomizeToolbar = 276  
Const xlDialogCustomViews = 493  
Const xlDialogDataDelete = 36  
Const xlDialogDataLabel = 379  
Const xlDialogDataSeries = 40  
Const xlDialogDataValidation = 525  
Const xlDialogDefineName = 61  
Const xlDialogDefineStyle = 229  
Const xlDialogDeleteFormat = 111  
Const xlDialogDeleteName = 110  
Const xlDialogDemote = 203  
Const xlDialogDisplay = 27  
Const xlDialogEditboxProperties = 438  
Const xlDialogEditColor = 223  
Const xlDialogEditDelete = 54  
Const xlDialogEditionOptions = 251  
Const xlDialogEditSeries = 228  
Const xlDialogErrorbarX = 463  
Const xlDialogErrorbarY = 464  
Const xlDialogExtract = 35  
Const xlDialogFileDelete = 6  
Const xlDialogFileSharing = 481  
Const xlDialogFillGroup = 200  
Const xlDialogFillWorkgroup = 301  
Const xlDialogFilter = 447  
Const xlDialogFilterAdvanced = 370  
Const xlDialogFindFile = 475  
Const xlDialogFont = 26  
Const xlDialogFontProperties = 381  
Const xlDialogFormatAuto = 269  
Const xlDialogFormatChart = 465  
Const xlDialogFormatCharttype = 423  
Const xlDialogFormatFont = 150  
Const xlDialogFormatLegend = 88  
Const xlDialogFormatMain = 225

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlDialogFormatMove = 128  
Const xlDialogFormatNumber = 42  
Const xlDialogFormatOverlay = 226  
Const xlDialogFormatSize = 129  
Const xlDialogFormatText = 89  
Const xlDialogFormulaFind = 64  
Const xlDialogFormulaGoto = 63  
Const xlDialogFormulaReplace = 130  
Const xlDialogFunctionWizard = 450  
Const xlDialogGallery3dArea = 193  
Const xlDialogGallery3dBar = 272  
Const xlDialogGallery3dColumn = 194  
Const xlDialogGallery3dLine = 195  
Const xlDialogGallery3dPie = 196  
Const xlDialogGallery3dSurface = 273  
Const xlDialogGalleryArea = 67  
Const xlDialogGalleryBar = 68  
Const xlDialogGalleryColumn = 69  
Const xlDialogGalleryCustom = 388  
Const xlDialogGalleryDoughnut = 344  
Const xlDialogGalleryLine = 70  
Const xlDialogGalleryPie = 71  
Const xlDialogGalleryRadar = 249  
Const xlDialogGalleryScatter = 72  
Const xlDialogGoalSeek = 198  
Const xlDialogGridlines = 76  
Const xlDialogInsert = 55  
Const xlDialogInsertHyperlink = 596  
Const xlDialogInsertNameLabel = 496  
Const xlDialogInsertObject = 259  
Const xlDialogInsertPicture = 342  
Const xlDialogInsertTitle = 380  
Const xlDialogLabelProperties = 436  
Const xlDialogListboxProperties = 437  
Const xlDialogMacroOptions = 382  
Const xlDialogMailEditMailer = 470  
Const xlDialogMailLogon = 339  
Const xlDialogMailNextLetter = 378  
Const xlDialogMainChart = 85  
Const xlDialogMainChartType = 185  
Const xlDialogMenuEditor = 322  
Const xlDialogMove = 262  
Const xlDialogNew = 119  
Const xlDialogNote = 154  
Const xlDialogObjectProperties = 207  
Const xlDialogObjectProtection = 214  
Const xlDialogOpen = 1  
Const xlDialogOpenLinks = 2  
Const xlDialogOpenMail = 188  
Const xlDialogOpenText = 441  
Const xlDialogOptionsCalculation = 318  
Const xlDialogOptionsChart = 325  
Const xlDialogOptionsEdit = 319  
Const xlDialogOptionsGeneral = 356  
Const xlDialogOptionsListsAdd = 458  
Const xlDialogOptionsTransition = 355  
Const xlDialogOptionsView = 320  
Const xlDialogOutline = 142  
Const xlDialogOverlay = 86  
Const xlDialogOverlayChartType = 186

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlDialogPageSetup = 7  
Const xlDialogParse = 91  
Const xlDialogPasteNames = 58  
Const xlDialogPasteSpecial = 53  
Const xlDialogPatterns = 84  
Const xlDialogPhonetic = 538  
Const xlDialogPivotCalculatedField = 570  
Const xlDialogPivotCalculatedItem = 572  
Const xlDialogPivotFieldGroup = 433  
Const xlDialogPivotFieldProperties = 313  
Const xlDialogPivotFieldUngroup = 434  
Const xlDialogPivotShowPages = 421  
Const xlDialogPivotSolveOrder = 568  
Const xlDialogPivotTableOptions = 567  
Const xlDialogPivotTableWizard = 312  
Const xlDialogPlacement = 300  
Const xlDialogPrint = 8  
Const xlDialogPrinterSetup = 9  
Const xlDialogPrintPreview = 222  
Const xlDialogPromote = 202  
Const xlDialogProperties = 474  
Const xlDialogProtectDocument = 28  
Const xlDialogProtectSharing = 620  
Const xlDialogPushbuttonProperties = 445  
Const xlDialogReplaceFont = 134  
Const xlDialogRoutingSlip = 336  
Const xlDialogRowHeight = 127  
Const xlDialogRun = 17  
Const xlDialogSaveAs = 5  
Const xlDialogSaveCopyAs = 456  
Const xlDialogSaveNewObject = 208  
Const xlDialogSaveWorkbook = 145  
Const xlDialogSaveWorkspace = 285  
Const xlDialogScale = 87  
Const xlDialogScenarioAdd = 307  
Const xlDialogScenarioCells = 305  
Const xlDialogScenarioEdit = 308  
Const xlDialogScenarioMerge = 473  
Const xlDialogScenarioSummary = 311  
Const xlDialogScrollbarProperties = 420  
Const xlDialogSelectSpecial = 132  
Const xlDialogSendMail = 189  
Const xlDialogSeriesAxes = 460  
Const xlDialogSeriesOptions = 557  
Const xlDialogSeriesOrder = 466  
Const xlDialogSeriesShape = 504  
Const xlDialogSeriesX = 461  
Const xlDialogSeriesY = 462  
Const xlDialogSetBackgroundPicture = 509  
Const xlDialogSetPrintTitles = 23  
Const xlDialogSetUpdateStatus = 159  
Const xlDialogSheet = -4116  
Const xlDialogShowDetail = 204  
Const xlDialogShowToolbar = 220  
Const xlDialogSize = 261  
Const xlDialogSort = 39  
Const xlDialogSortSpecial = 192  
Const xlDialogSplit = 137  
Const xlDialogStandardFont = 190  
Const xlDialogStandardWidth = 472

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlDialogStyle = 44  
Const xlDialogSubscribeTo = 218  
Const xlDialogSubtotalCreate = 398  
Const xlDialogSummaryInfo = 474  
Const xlDialogTable = 41  
Const xlDialogTabOrder = 394  
Const xlDialogTextToColumns = 422  
Const xlDialogUnhide = 94  
Const xlDialogUpdateLink = 201  
Const xlDialogVbaInsertFile = 328  
Const xlDialogVbaMakeAddin = 478  
Const xlDialogVbaProcedureDefinition = 330  
Const xlDialogView3d = 197  
Const xlDialogWindowMove = 14  
Const xlDialogWindowSize = 13  
Const xlDialogWorkbookAdd = 281  
Const xlDialogWorkbookCopy = 283  
Const xlDialogWorkbookInsert = 354  
Const xlDialogWorkbookMove = 282  
Const xlDialogWorkbookName = 386  
Const xlDialogWorkbookNew = 302  
Const xlDialogWorkbookOptions = 284  
Const xlDialogWorkbookProtect = 417  
Const xlDialogWorkbookTabSplit = 415  
Const xlDialogWorkbookUnhide = 384  
Const xlDialogWorkgroup = 199  
Const xlDialogWorkspace = 95  
Const xlDialogZoom = 256  
Const xlDiamond = 2  
Const xlDIF = 9  
Const xlDifferenceFrom = 2  
Const xlDirect = 1  
Const xlDisabled = 0  
Const xlDisplayShapes = -4104  
Const xlDistributed = -4117  
Const xlDivide = 5  
Const xlDoNotSaveChanges = 2  
Const xlDot = -4118  
Const xlDouble = -4119  
Const xlDoubleAccounting = 5  
Const xlDoubleClosed = 5  
Const xlDoubleOpen = 4  
Const xlDoubleQuote = 1  
Const xlDoughnut = -4120  
Const xlDoughnutExploded = 80  
Const xlDown = -4121  
Const xlDownBars = 20  
Const xlDownThenOver = 1  
Const xlDownward = -4170  
Const xlDrawingObject = 14  
Const xlDropDown = 2  
Const xlDropLines = 26  
Const xlDRW = 4  
Const xlDXF = 5  
Const xlEdgeBottom = 9  
Const xlEdgeLeft = 7  
Const xlEdgeRight = 10  
Const xlEdgeTop = 8  
Const xlEditBox = 3  
Const xlEditionDate = 2

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlEnd = 2
Const xlEndSides = 3
Const xlEntireChart = 20
Const xlEPS = 8
Const xlEqual = 3
Const xlErrDiv0 = 2007
Const xlErrNA = 2042
Const xlErrName = 2029
Const xlErrNull = 2000
Const xlErrNum = 2036
Const xlErrorBarIncludeBoth = 1
Const xlErrorBarIncludeMinusValues = 3
Const xlErrorBarIncludeNone = -4142
Const xlErrorBarIncludePlusValues = 2
Const xlErrorBars = 9
Const xlErrorBarTypeCustom = -4114
Const xlErrorBarTypeFixedValue = 1
Const xlErrorBarTypePercent = 2
Const xlErrorBarTypeStDev = -4155
Const xlErrorBarTypeStError = 4
Const xlErrorHandler = 2
Const xlErrors = 16
Const xlErrRef = 2023
Const xlErrValue = 2015
Const xlExcel2 = 16
Const xlExcel2FarEast = 27
Const xlExcel3 = 29
Const xlExcel4 = 33
Const xlExcel4IntlMacroSheet = 4
Const xlExcel4MacroSheet = 3
Const xlExcel4Workbook = 35
Const xlExcel5 = 39
Const xlExcel7 = 39
Const xlExcel9795 = 43
Const xlExcelLinks = 1
Const xlExcelMenus = 1
Const xlExclusive = 3
Const xlExponential = 5
Const xlExpression = 2
Const xlExtended = 3
Const xlExternal = 2
Const xlFill = 5
Const xlFillCopy = 1
Const xlFillDays = 5
Const xlFillDefault = 0
Const xlFillFormats = 3
Const xlFillMonths = 7
Const xlFillSeries = 2
Const xlFillValues = 4
Const xlFillWeekdays = 6
Const xlFillWithAll = -4104
Const xlFillWithContents = 2
Const xlFillWithFormats = -4122
Const xlFillYears = 8
Const xlFilterCopy = 2
Const xlFilterInPlace = 1
Const xlFirst = 0
Const xlFitToPage = 2
Const xlFixedValue = 1
Const xlFixedWidth = 2
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlFloating = 5  
Const xlFloor = 23  
Const xlFormats = -4122  
Const xlFormula = 5  
Const xlFormulas = -4123  
Const xlFreeFloating = 3  
Const xlFront = 4  
Const xlFrontEnd = 6  
Const xlFrontSides = 5  
Const xlFullPage = 3  
Const xlFunction = 1  
Const xlGeneral = 1  
Const xlGeneralFormatName = 26  
Const xlGray16 = 17  
Const xlGray25 = -4124  
Const xlGray50 = -4125  
Const xlGray75 = -4126  
Const xlGray8 = 18  
Const xlGreater = 5  
Const xlGreaterEqual = 7  
Const xlGregorian = 2  
Const xlGrid = 15  
Const xlGridline = 22  
Const xlGroupBox = 4  
Const xlGrowth = 2  
Const xlGrowthTrend = 10  
Const xlGuess = 0  
Const xlHairline = 1  
Const xlHAlignCenter = -4108  
Const xlHAlignCenterAcrossSelection = 7  
Const xlHAlignDistributed = -4117  
Const xlHAlignFill = 5  
Const xlHAlignGeneral = 1  
Const xlHAlignJustify = -4130  
Const xlHAlignLeft = -4131  
Const xlHAlignRight = -4152  
Const xlHGL = 6  
Const xlHidden = 0  
Const xlHide = 3  
Const xlHigh = -4127  
Const xlHiLoLines = 25  
Const xlHindiNumerals = 3  
Const xlHiragana = 2  
Const xlHorizontal = -4128  
Const xlHourCode = 22  
Const xlIBeam = 3  
Const xlIcons = 1  
Const xlIMEModeAlpha = 8  
Const xlIMEModeAlphaFull = 7  
Const xlIMEModeDisable = 3  
Const xlIMEModeHangul = 10  
Const xlIMEModeHangulFull = 9  
Const xlIMEModeHiragana = 4  
Const xlIMEModeKatakana = 5  
Const xlIMEModeKatakanaHalf = 6  
Const xlIMEModeNoControl = 0  
Const xlIMEModeOff = 2  
Const xlIMEModeOn = 1  
Const xlImmediatePane = 12  
Const xlIndex = 9



## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlInfo = -4129  
Const xlInsertDeleteCells = 1  
Const xlInsertEntireRows = 2  
Const xlInside = 2  
Const xlInsideHorizontal = 12  
Const xlInsideVertical = 11  
Const xlInteger = 2  
Const xlInterpolated = 3  
Const xlInterrupt = 1  
Const xlIntlAddIn = 26  
Const xlIntlMacro = 25  
Const xlJustify = -4130  
Const xlKatakana = 1  
Const xlKatakanaHalf = 0  
Const xlLabel = 5  
Const xlLabelOnly = 1  
Const xlLabelPositionAbove = 0  
Const xlLabelPositionBelow = 1  
Const xlLabelPositionBestFit = 5  
Const xlLabelPositionCenter = -4108  
Const xlLabelPositionCustom = 7  
Const xlLabelPositionInsideBase = 4  
Const xlLabelPositionInsideEnd = 3  
Const xlLabelPositionLeft = -4131  
Const xlLabelPositionMixed = 6  
Const xlLabelPositionOutsideEnd = 2  
Const xlLabelPositionRight = -4152  
Const xlLandscape = 2  
Const xlLast = 1  
Const xlLastCell = 11  
Const xlLatin = -5001  
Const xlLeaderLines = 29  
Const xlLeft = -4131  
Const xlLeftBrace = 12  
Const xlLeftBracket = 10  
Const xlLeftToRight = 2  
Const xlLegend = 24  
Const xlLegendEntry = 12  
Const xlLegendKey = 13  
Const xlLegendPositionBottom = -4107  
Const xlLegendPositionCorner = 2  
Const xlLegendPositionLeft = -4131  
Const xlLegendPositionRight = -4152  
Const xlLegendPositionTop = -4160  
Const xlLess = 6  
Const xlLessEqual = 8  
Const xlLightDown = 13  
Const xlLightHorizontal = 11  
Const xlLightUp = 14  
Const xlLightVertical = 12  
Const xlLine = 4  
Const xlLinear = -4132  
Const xlLinearTrend = 9  
Const xlLineMarkers = 65  
Const xlLineMarkersStacked = 66  
Const xlLineMarkersStacked100 = 67  
Const xlLineStacked = 63  
Const xlLineStacked100 = 64  
Const xlLineStyleNone = -4142  
Const xlLinkInfoOLELinks = 2

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlLinkInfoPublishers = 5  
Const xlLinkInfoSubscribers = 6  
Const xlLinkTypeExcelLinks = 1  
Const xlLinkTypeOLELinks = 2  
Const xllist1 = 10  
Const xllist2 = 11  
Const xllist3 = 12  
Const xllistBox = 6  
Const xllistSeparator = 5  
Const xlLocalFormat1 = 15  
Const xlLocalFormat2 = 16  
Const xlLocalSessionChanges = 2  
Const xlLocationAsNewSheet = 1  
Const xlLocationAsObject = 2  
Const xlLocationAutomatic = 3  
Const xlLogarithmic = -4133  
Const xlLogical = 4  
Const xlLogicalCursor = 1  
Const xlLong = 3  
Const xlLotusHelp = 2  
Const xlLow = -4134  
Const xlLowerCaseColumnLetter = 9  
Const xlLowerCaseRowLetter = 8  
Const xlLTR = -5003  
Const xlMacintosh = 1  
Const xlMacrosheetCell = 7  
Const xlMajorGridlines = 15  
Const xlManual = -4135  
Const xlManualUpdate = 5  
Const xlMAPI = 1  
Const xlMarkerStyleAutomatic = -4105  
Const xlMarkerStyleCircle = 8  
Const xlMarkerStyleDash = -4115  
Const xlMarkerStyleDiamond = 2  
Const xlMarkerStyleDot = -4118  
Const xlMarkerStyleNone = -4142  
Const xlMarkerStylePicture = -4147  
Const xlMarkerStylePlus = 9  
Const xlMarkerStyleSquare = 1  
Const xlMarkerStyleStar = 5  
Const xlMarkerStyleTriangle = 3  
Const xlMarkerStyleX = -4168  
Const xlMax = -4136  
Const xlMaximized = -4137  
Const xlMaximum = 2  
Const xlMDY = 44  
Const xlMedium = -4138  
Const xlMetric = 35  
Const xlMicrosoftAccess = 4  
Const xlMicrosoftFoxPro = 5  
Const xlMicrosoftMail = 3  
Const xlMicrosoftPowerPoint = 2  
Const xlMicrosoftProject = 6  
Const xlMicrosoftSchedulePlus = 7  
Const xlMicrosoftWord = 1  
Const xlMin = -4139  
Const xlMinimized = -4140  
Const xlMinimum = 4  
Const xlMinorGridlines = 16  
Const xlMinusValues = 3

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlMinuteCode = 23  
Const xlMixed = 2  
Const xlMixedLabels = 3  
Const xlModule = -4141  
Const xlMonth = 3  
Const xlMonthCode = 20  
Const xlMonthLeadingZero = 41  
Const xlMonthNameChars = 30  
Const xlMonths = 1  
Const xlMove = 2  
Const xlMoveAndSize = 1  
Const xlMovingAvg = 6  
Const xlMSDOS = 3  
Const xlMultiply = 4  
Const xlNarrow = 1  
Const xlNext = 1  
Const xlNextToAxis = 4  
Const xlNo = 2  
Const xlNoAdditionalCalculation = -4143  
Const xlNoButton = 0  
Const xlNoButtonChanges = 1  
Const xlNoCap = 2  
Const xlNoChange = 1  
Const xlNoChanges = 4  
Const xlNoConversion = 3  
Const xlNoDockingChanges = 3  
Const xlNoDocuments = 3  
Const xlNoIndicator = 0  
Const xlNoLabels = -4142  
Const xlNoMailSystem = 0  
Const xlNoncurrencyDigits = 29  
Const xlNone = -4142  
Const xlNonEnglishFunctions = 34  
Const xlNoRestrictions = 0  
Const xlNormal = -4143  
Const xlNormalView = 1  
Const xlNorthwestArrow = 1  
Const xlNoSelection = -4142  
Const xlNoShapeChanges = 2  
Const xlNotBetween = 2  
Const xlNotEqual = 4  
Const xlNotes = -4144  
Const xlNothing = 28  
Const xlNotPlotted = 1  
Const xlNotXLM = 3  
Const xlNotYetReviewed = 3  
Const xlNotYetRouted = 0  
Const xlNumber = -4145  
Const xlNumbers = 1  
Const xlOff = -4146  
Const xlOLEControl = 2  
Const xlOLEEmbed = 1  
Const xlOLELink = 0  
Const xlOLELinks = 2  
Const xlOn = 1  
Const xlOneAfterAnother = 1  
Const xlOpaque = 3  
Const xlOpen = 2  
Const xlOpenSource = 3  
Const xlOptionButton = 7

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlOr = 2
Const xlOrigin = 3
Const xlOtherSessionChanges = 3
Const xlOutside = 3
Const xlOverThenDown = 2
Const xlOverwriteCells = 0
Const xlPageBreakAutomatic = -4105
Const xlPageBreakFull = 1
Const xlPageBreakManual = -4135
Const xlPageBreakPartial = 2
Const xlPageBreakPreview = 2
Const xlPageField = 3
Const xlPageHeader = 2
Const xlPageItem = 6
Const xlPaper10x14 = 16
Const xlPaper11x17 = 17
Const xlPaperA3 = 8
Const xlPaperA4 = 9
Const xlPaperA4Small = 10
Const xlPaperA5 = 11
Const xlPaperB4 = 12
Const xlPaperB5 = 13
Const xlPaperCsheet = 24
Const xlPaperDsheet = 25
Const xlPaperEnvelope10 = 20
Const xlPaperEnvelope11 = 21
Const xlPaperEnvelope12 = 22
Const xlPaperEnvelope14 = 23
Const xlPaperEnvelope9 = 19
Const xlPaperEnvelopeB4 = 33
Const xlPaperEnvelopeB5 = 34
Const xlPaperEnvelopeB6 = 35
Const xlPaperEnvelopeC3 = 29
Const xlPaperEnvelopeC4 = 30
Const xlPaperEnvelopeC5 = 28
Const xlPaperEnvelopeC6 = 31
Const xlPaperEnvelopeC65 = 32
Const xlPaperEnvelopeDL = 27
Const xlPaperEnvelopeItaly = 36
Const xlPaperEnvelopeMonarch = 37
Const xlPaperEnvelopePersonal = 38
Const xlPaperEsheet = 26
Const xlPaperExecutive = 7
Const xlPaperFanfoldLegalGerman = 41
Const xlPaperFanfoldStdGerman = 40
Const xlPaperFanfoldUS = 39
Const xlPaperFolio = 14
Const xlPaperLedger = 4
Const xlPaperLegal = 5
Const xlPaperLetter = 1
Const xlPaperLetterSmall = 2
Const xlPaperNote = 18
Const xlPaperQuarto = 15
Const xlPaperStatement = 6
Const xlPaperTabloid = 3
Const xlPaperUser = 256
Const xlParamTypeBigInt = -5
Const xlParamTypeBinary = -2
Const xlParamTypeBit = -7
Const xlParamTypeChar = 1
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlParamTypeDate = 9
Const xlParamTypeDecimal = 3
Const xlParamTypeDouble = 8
Const xlParamTypeFloat = 6
Const xlParamTypeInteger = 4
Const xlParamTypeLongVarBinary = -4
Const xlParamTypeLongVarChar = -1
Const xlParamTypeNumeric = 2
Const xlParamTypeReal = 7
Const xlParamTypeSmallInt = 5
Const xlParamTypeTime = 10
Const xlParamTypeTimestamp = 11
Const xlParamTypeTinyInt = -6
Const xlParamTypeUnknown = 0
Const xlParamTypeVarBinary = -3
Const xlParamTypeVarChar = 12
Const xlPart = 2
Const xlPartial = 3
Const xlPasteAll = -4104
Const xlPasteAllExceptBorders = 6
Const xlPasteComments = -4144
Const xlPasteFormats = -4122
Const xlPasteFormulas = -4123
Const xlPasteSpecialOperationAdd = 2
Const xlPasteSpecialOperationDivide = 5
Const xlPasteSpecialOperationMultiply = 4
Const xlPasteSpecialOperationNone = -4142
Const xlPasteSpecialOperationSubtract = 3
Const xlPasteValues = -4163
Const xlPatternAutomatic = -4105
Const xlPatternChecker = 9
Const xlPatternCrissCross = 16
Const xlPatternDown = -4121
Const xlPatternGray16 = 17
Const xlPatternGray25 = -4124
Const xlPatternGray50 = -4125
Const xlPatternGray75 = -4126
Const xlPatternGray8 = 18
Const xlPatternGrid = 15
Const xlPatternHorizontal = -4128
Const xlPatternLightDown = 13
Const xlPatternLightHorizontal = 11
Const xlPatternLightUp = 14
Const xlPatternLightVertical = 12
Const xlPatternNone = -4142
Const xlPatternSemiGray75 = 10
Const xlPatternSolid = 1
Const xlPatternUp = -4162
Const xlPatternVertical = -4166
Const xlPCT = 13
Const xlPCX = 10
Const xlPercent = 2
Const xlPercentDifferenceFrom = 4
Const xlPercentOf = 3
Const xlPercentOfColumn = 7
Const xlPercentOfRow = 6
Const xlPercentOfTotal = 8
Const xlPhoneticAlignCenter = 2
Const xlPhoneticAlignDistributed = 3
Const xlPhoneticAlignLeft = 1
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlPhoneticAlignNoControl = 0  
Const xlPIC = 11  
Const xlPICT = 1  
Const xlPicture = -4147  
Const xlPie = 5  
Const xlPieExploded = 69  
Const xlPieOfPie = 68  
Const xlPinYin = 1  
Const xlPivotTable = -4148  
Const xlPlaceholders = 2  
Const xlPlotArea = 19  
Const xlPLT = 12  
Const xlPlus = 9  
Const xlPlusValues = 2  
Const xlPolynomial = 3  
Const xlPortrait = 1  
Const xlPower = 4  
Const xlPowerTalk = 2  
Const xlPrevious = 2  
Const xlPrimary = 1  
Const xlPrimaryButton = 1  
Const xlPrinter = 2  
Const xlPrintInPlace = 16  
Const xlPrintNoComments = -4142  
Const xlPrintSheetEnd = 1  
Const xlPriorityHigh = -4127  
Const xlPriorityLow = -4134  
Const xlPriorityNormal = -4143  
Const xlProduct = -4149  
Const xlPrompt = 0  
Const xlPublisher = 1  
Const xlPublishers = 5  
Const xlPyramidBarClustered = 109  
Const xlPyramidBarStacked = 110  
Const xlPyramidBarStacked100 = 111  
Const xlPyramidCol = 112  
Const xlPyramidColClustered = 106  
Const xlPyramidColStacked = 107  
Const xlPyramidColStacked100 = 108  
Const xlPyramidToMax = 2  
Const xlPyramidToPoint = 1  
Const xlR1C1 = -4150  
Const xlRadar = -4151  
Const xlRadarAxisLabels = 27  
Const xlRadarFilled = 82  
Const xlRadarMarkers = 81  
Const xlRange = 2  
Const xlRangeAutoFormat3DEffects1 = 13  
Const xlRangeAutoFormat3DEffects2 = 14  
Const xlRangeAutoFormatAccounting1 = 4  
Const xlRangeAutoFormatAccounting2 = 5  
Const xlRangeAutoFormatAccounting3 = 6  
Const xlRangeAutoFormatAccounting4 = 17  
Const xlRangeAutoFormatClassic1 = 1  
Const xlRangeAutoFormatClassic2 = 2  
Const xlRangeAutoFormatClassic3 = 3  
Const xlRangeAutoFormatColor1 = 7  
Const xlRangeAutoFormatColor2 = 8  
Const xlRangeAutoFormatColor3 = 9  
Const xlRangeAutoFormatList1 = 10

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlRangeAutoFormatList2 = 11
Const xlRangeAutoFormatList3 = 12
Const xlRangeAutoFormatLocalFormat1 = 15
Const xlRangeAutoFormatLocalFormat2 = 16
Const xlRangeAutoFormatLocalFormat3 = 19
Const xlRangeAutoFormatLocalFormat4 = 20
Const xlRangeAutoFormatNone = -4142
Const xlRangeAutoFormatSimple = -4154
Const xlReadOnly = 3
Const xlReadWrite = 2
Const xlReference = 4
Const xlRelative = 4
Const xlRelRowAbsColumn = 3
Const xlRight = -4152
Const xlRightBrace = 13
Const xlRightBracket = 11
Const xlRoutingComplete = 2
Const xlRoutingInProgress = 1
Const xlRowField = 1
Const xlRowHeader = -4153
Const xlRowItem = 4
Const xlRowLabels = 1
Const xlRows = 1
Const xlRowSeparator = 15
Const xlRowThenColumn = 1
Const xlRTF = 4
Const xlRTL = -5004
Const xlRunningTotal = 5
Const xlSaveChanges = 1
Const xlScale = 3
Const xlScaleLinear = -4132
Const xlScaleLogarithmic = -4133
Const xlScreen = 1
Const xlScreenSize = 1
Const xlScrollBar = 8
Const xlSecondary = 2
Const xlSecondaryButton = 2
Const xlSecondCode = 24
Const xlSelect = 3
Const xlSemiautomatic = 2
Const xlSemiGray75 = 10
Const xlSendPublisher = 2
Const xlSeries = 3
Const xlSeriesAxis = 3
Const xlSeriesLines = 22
Const xlShape = 14
Const xlShared = 2
Const xlSheetHidden = 0
Const xlSheetVeryHidden = 2
Const xlSheetVisible = -1
Const xlShiftDown = -4121
Const xlShiftToLeft = -4159
Const xlShiftToRight = -4161
Const xlShiftUp = -4162
Const xlShort = 1
Const xlShowLabel = 4
Const xlShowLabelAndPercent = 5
Const xlShowPercent = 3
Const xlShowValue = 2
Const xlSides = 1
```

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlSimple = -4154
Const xlSinceMyLastSave = 1
Const xlSingle = 2
Const xlSingleAccounting = 4
Const xlSingleQuote = 2
Const xlSizelsArea = 1
Const xlSizelsWidth = 2
Const xlSlantDashDot = 13
Const xlSolid = 1
Const xlSortColumns = 1
Const xlSortLabels = 2
Const xlSortRows = 2
Const xlSortValues = 1
Const xlSpinner = 9
Const xlSplitByCustomSplit = 4
Const xlSplitByPercentValue = 3
Const xlSplitByPosition = 1
Const xlSplitByValue = 2
Const xlSquare = 1
Const xlStack = 2
Const xlStackScale = 3
Const xlStandardSummary = 1
Const xlStar = 5
Const xlStDev = -4155
Const xlStDevP = -4156
Const xlStError = 4
Const xlStockHLC = 88
Const xlStockOHLC = 89
Const xlStockVHLC = 90
Const xlStockVOHLC = 91
Const xlStretch = 1
Const xlStrict = 2
Const xlStroke = 2
Const xlSubscriber = 2
Const xlSubscribers = 6
Const xlSubscribeToPicture = -4147
Const xlSubscribeToText = -4158
Const xlSubtract = 3
Const xlSum = -4157
Const xlSummaryAbove = 0
Const xlSummaryBelow = 1
Const xlSummaryOnLeft = -4131
Const xlSummaryOnRight = -4152
Const xlSummaryPivotTable = -4148
Const xlSurface = 83
Const xlSurfaceTopView = 85
Const xlSurfaceTopViewWireframe = 86
Const xlSurfaceWireframe = 84
Const xlSYLK = 2
Const xlSyllabary = 1
Const xlSystem = 1
Const xlTableBody = 8
Const xlTabPositionFirst = 0
Const xlTabPositionLast = 1
Const xlTemplate = 17
Const xlText = -4158
Const xlTextBox = 16
Const xlTextMac = 19
Const xlTextMSDOS = 21
Const xlTextPrinter = 36
```



## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlTextQualifierDoubleQuote = 1  
Const xlTextQualifierNone = -4142  
Const xlTextQualifierSingleQuote = 2  
Const xlTextValues = 2  
Const xlTextWindows = 20  
Const xlThick = 4  
Const xlThin = 2  
Const xlThousandsSeparator = 4  
Const xlTickLabelOrientationAutomatic = -4105  
Const xlTickLabelOrientationDownward = -4170  
Const xlTickLabelOrientationHorizontal = -4128  
Const xlTickLabelOrientationUpward = -4171  
Const xlTickLabelOrientationVertical = -4166  
Const xlTickLabelPositionHigh = -4127  
Const xlTickLabelPositionLow = -4134  
Const xlTickLabelPositionNextToAxis = 4  
Const xlTickLabelPositionNone = -4142  
Const xlTickMarkCross = 4  
Const xlTickMarkInside = 2  
Const xlTickMarkNone = -4142  
Const xlTickMarkOutside = 3  
Const xlTIF = 9  
Const xlTiled = 1  
Const xlTimeLeadingZero = 45  
Const xlTimeScale = 3  
Const xlTimeSeparator = 18  
Const xlTitleBar = 8  
Const xlToLeft = -4159  
Const xlToolbar = 1  
Const xlToolbarButton = 2  
Const xlToolbarProtectionNone = -4143  
Const xlTop = -4160  
Const xlTop10Items = 3  
Const xlTop10Percent = 5  
Const xlTopToBottom = 1  
Const xlToRight = -4161  
Const xlTransparent = 2  
Const xlTrendline = 8  
Const xlTriangle = 3  
Const xlUnderlineStyleDouble = -4119  
Const xlUnderlineStyleDoubleAccounting = 5  
Const xlUnderlineStyleNone = -4142  
Const xlUnderlineStyleSingle = 2  
Const xlUnderlineStyleSingleAccounting = 4  
Const xlUnlockedCells = 1  
Const xlUp = -4162  
Const xlUpBars = 18  
Const xlUpdateState = 1  
Const xlUpdateSubscriber = 2  
Const xlUpperCaseColumnLetter = 7  
Const xlUpperCaseRowLetter = 6  
Const xlUpward = -4171  
Const xlUserDefined = 22  
Const xlUserResolution = 1  
Const xlValidAlertInformation = 3  
Const xlValidAlertStop = 1  
Const xlValidAlertWarning = 2  
Const xlValidateCustom = 7  
Const xlValidateDate = 4  
Const xlValidateDecimal = 2

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

Const xlValidateInputOnly = 0  
Const xlValidateList = 3  
Const xlValidateTextLength = 6  
Const xlValidateTime = 5  
Const xlValidateWholeNumber = 1  
Const xlVAlignBottom = -4107  
Const xlVAlignCenter = -4108  
Const xlVAlignDistributed = -4117  
Const xlVAlignJustify = -4130  
Const xlVAlignTop = -4160  
Const xlVALU = 8  
Const xlValue = 2  
Const xlValues = -4163  
Const xlVar = -4164  
Const xlVarP = -4165  
Const xlVerbOpen = 2  
Const xlVerbPrimary = 1  
Const xlVertical = -4166  
Const xlVeryHidden = 2  
Const xlVisible = 12  
Const xlVisualCursor = 2  
Const xlWait = 2  
Const xlWalls = 5  
Const xlWatchPane = 11  
Const xlWBATChart = -4109  
Const xlWBATEXcel4IntlMacroSheet = 4  
Const xlWBATEXcel4MacroSheet = 3  
Const xlWBATWorksheet = -4167  
Const xlWeekday = 2  
Const xlWeekdayNameChars = 31  
Const xlWhole = 1  
Const xlWide = 3  
Const xlWindows = 2  
Const xlWJ2WD1 = 14  
Const xlWJ3 = 40  
Const xlWJ3FJ3 = 41  
Const xlWK1 = 5  
Const xlWK1ALL = 31  
Const xlWK1FMT = 30  
Const xlWK3 = 15  
Const xlWK3FM3 = 32  
Const xlWK4 = 38  
Const xlWKS = 4  
Const xlWMF = 2  
Const xlWorkbook = 1  
Const xlWorkbookNormal = -4143  
Const xlWorkbookTab = 6  
Const xlWorks2FarEast = 28  
Const xlWorksheet = -4167  
Const xlWorksheet4 = 1  
Const xlWorksheetCell = 3  
Const xlWorksheetShort = 5  
Const xlWPG = 3  
Const xlWQ1 = 34  
Const xlX = -4168  
Const xlXErrorBars = 10  
Const xlXYScatter = -4169  
Const xlXYScatterLines = 74  
Const xlXYScatterLinesNoMarkers = 75  
Const xlXYScatterSmooth = 72

## LA PROGRAMMATION OBJET EN LOTUSSCRIPT

```
Const xlXYScatterSmoothNoMarkers = 73
Const xlY = 1
Const xlYear = 4
Const xlYearCode = 19
Const xlYears = 2
Const xlYErrorBars = 11
Const xlYes = 1
Const xlZero = 2
```