Load Case Details: Load Case Operation

Functions

afx_msg VARIANT	**OSLoadUI::GetPrimaryLoadCaseNumbers** (VARIANT FAR &lCases) Gets all primary load case numbers.
afx_msg VARIANT	**OSLoadUI::CreateNewPrimaryLoad** (const VARIANT FAR &varPrimaryLoadTitle) Creates new PRIMARY load case.
afx_msg VARIANT	**OSLoadUI::GetActiveLoad** () Returns the current load case number.
afx_msg VARIANT	**OSLoadUI::GetLoadCaseTitle** (const VARIANT FAR &varLoadCombNo) Returns title of the specified load case as a text string. Input 0 to retrieve title of current active load case or reference load case.
afx_msg VARIANT	**OSLoadUI::SetLoadType** (const VARIANT FAR &varLoadNo, const VARIANT FAR &varLoadType) Set load type to load case(s) for considering load combination.
afx_msg VARIANT	**OSLoadUI::CreateNewPrimaryLoadEx** (const VARIANT FAR &varPrimaryLoadTitle, const VARIANT FAR &varLoadType) Creates new PRIMARY load case.
afx_msg VARIANT	**OSLoadUI::GetLoadType** (const VARIANT FAR &varLoadNo) Returns primary load case category(s) as an long value.
afx_msg VARIANT	**OSLoadUI::CreateLoadList** (const VARIANT FAR &varListType, const VARIANT FAR &varList) Creates a load list.
afx_msg VARIANT	**OSLoadUI::GetLoadListCount** () Gets the number of existing load list(s)
afx_msg VARIANT	**OSLoadUI::GetLoadCountInLoadList** (const VARIANT FAR &varLoadListIndex) Gets the number of load case(s) in specified load list.
afx_msg VARIANT	**OSLoadUI::GetLoadsInLoadList** (const VARIANT FAR &varLoadListIndex, const VARIANT FAR &varLoadList) Gets the load case(s) in specified load list.
afx_msg VARIANT	**OSLoadUI::DeleteLoadList** (const VARIANT FAR &varLoadListIndex) Deletes specified load list.
afx_msg long	**OSLoadUI::SetASDLoadAttribute** (long nLoadCase, StrengthType l, bool bIncrease) Sets Allowable Stress Design (ASD) load attribute.
afx_msg long	**OSLoadUI::SetLSDLoadAttribute** (long nLoadCase) Sets Limit State Design (LSD) load attribute.

afx_msg long	**OSLoadUI::RemoveAttribute** (long lLoadCase) Removes the load attribute specified by lLoadCase.
afx_msg long	**OSLoadUI::GetAttribute** (long lLoadCase) Gets load attribute information of specified load case.
afx_msg long	**OSLoadUI::GetLoadTypeCount** (int loadType) Gets the number of load(s) with specified Load Type in active Load Case.
afx_msg long	**OSLoadUI::GetListSizeForLoadType** (int loadType, int loadIndex) Gets number of entities to vwhich specified Load Type and load index.
afx_msg VARIANT	**OSLoadUI::GetAssignmentListForLoadType** (const VARIANT FAR &loadType, const VARIANT FAR &loadIndex, VARIANT FAR &varList) Gets the list of entities that have been assigned to a load command in the active load case (see function SetLoadActive). This command is identified as the LoadType, which has a defined reference number (see below) and an index number starting from 0. That is, if a load command has been defined 10 times in the load case, then index 0 identifies the first instance of the command and index 9 identifies the 10th. See function **GetLoadItemsCount()** to determine how many instances there are of the command in the active load case.
afx_msg VARIANT	**OSLoadUI::DeletePrimaryLoadCases** (const VARIANT FAR &varPrimaryLoadCaseNos, const VARIANT FAR &bReferenceLoads) Deletes specified Primary/Reference Load Cases.
afx_msg VARIANT	**OSLoadUI::DeleteReferenceLoadCases** (const VARIANT FAR &varPrimaryLoadCaseNos) Deletes specified Reference Load Cases.
afx_msg VARIANT	**OSLoadUI::ClearPrimaryLoadCase** (const VARIANT FAR &varLoadCaseNos, const VARIANT FAR &bReferenceLoads) Clears the load items in a specified Primary Load cases or Reference Load cases.
afx_msg VARIANT	**OSLoadUI::ClearReferenceLoadCase** (const VARIANT FAR &varLoadCaseNos) Clears the load items in a specified Primary Load cases or Reference Load cases.
afx_msg VARIANT	**OSLoadUI::CreateNewPrimaryLoadEx2** (const VARIANT FAR &varPrimaryLoadTitle, const VARIANT FAR &varLoadType, long nLoadCaseNo) Creates new PRIMARY load case.
afx_msg VARIANT	**OSLoadUI::GetLoadItemsCount** (long nLoadCaseNo) Returns the number of loaditems in the specified load case.
afx_msg VARIANT	**OSLoadUI::GetLoadItemType** (long nLoadCaseNo, long nLoadItemIndex) Returns the load item type for the specified loadIndex and loadCase.

Detailed Description

These functions are related to operating Load Case(s)

Function Documentation

◆ ClearPrimaryLoadCase()

VARIANT OSLoadUI::ClearPrimaryLoadCase (const VARIANT FAR & varLoadCaseNos,
const VARIANT FAR & varIsReferenceLoads)

Clears the load items in a specified Primary Load cases or Reference Load cases.

Parameters

[in] **varLoadCaseNos** Primary load case reference ID(s) in VARIANT array,

[in] **varIsReferenceLoads** If reference load case(s): **TRUE** or **FALSE**.

Return values

1 OK.

0 Failed to delete load(s)

C++ Syntax

```
// Delete primary load cases.
long RetVal = OSLoadUI::ClearPrimaryLoadCase(varLoadCaseNos, 0);
```

.

VBA Syntax

```
' Delete primary load case No. 13.
Dim bResult As VARIANT = OSLoadUI.ClearPrimaryLoadCase(13, 1)
```

.

See also

OSLoadUI::CreateNewPrimaryLoad

OSLoadUI::CreateNewReferenceLoad

OSLoadUI::DeletePrimaryLoadCases

◆ ClearReferenceLoadCase()

VARIANT OSLoadUI::ClearReferenceLoadCase (const VARIANT FAR & varLoadCaseNos)

Clears the load items in a specified Primary Load cases or Reference Load cases.

Parameters

[in] **varLoadCaseNos** Primary load case reference ID(s) in VARIANT array,

Return values

1 OK.

0 Failed to delete load(s)

C++ Syntax

```
// Delete reference load cases.
long RetVal = OSLoadUI::ClearReferenceLoadCase(varLoadCaseNos);
```

VBA Syntax

```
' Delete reference load case No. 13.
Dim bResult As VARIANT = OSLoadUI.ClearReferenceLoadCase(13)
```

See also

OSLoadUI::CreateNewReferenceLoad

OSLoadUI::DeleteReferenceLoadCases

◆ CreateLoadList()

VARIANT OSLoadUI::CreateLoadList (const VARIANT FAR & varListType,
const VARIANT FAR & varLoadCaseList)

Creates a load list.

Parameters

[in] **varListType** Load list type: 0 and 1 for load list and load envelope list, respectively.

[in] **varLoadCaseList** Load case reference ID(s) VARIANT array.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Create a load list.
VARIANT RetVal = OSLoadUI::CreateLoadList(varListType, varLoadCaseList);
```

VBA Syntax

```
' Create a load list.
Dim RetVal As VARIANT = OSLoadUI.CreateLoadList(varListType, varLoadCaseList)
```

See also

OSLoadUI::GetLoadListCount

OSLoadUI::GetLoadCountInLoadList

OSLoadUI::GetLoadsInLoadList

OSLoadUI::DeleteLoadList

◆ CreateNewPrimaryLoad()

VARIANT OSLoadUI::CreateNewPrimaryLoad (const VARIANT FAR & varPrimaryLoadTitle)

Creates new PRIMARY load case.

Parameters

[in] **varPrimaryLoadTitle** The load case string title.

Value	Load Type	Value	Load Type
0	Dead	12	Traffic
1	Live	13	Temp
2	Roof Live	14	Imperfection
3	Wind	15	Accidental
4	Seismic-H	16	Flood
5	Seismic-V	17	Ice
6	Snow	18	Wind Ice
7	Fluids	19	Crane Hook
8	Soil	20	Mass
9	Rain	21	Gravity
10	Ponding	22	Push
11	Dust	23	None

Return values

<Val> **nLoadNo**.

-1 General error.

-8004 Fail to create load.

C++ Syntax

```
// Create a new primary load case numbered #1 and titled with "LOAD CASE 1", type of dead
       load.
VARIANT nSupport = OSLoadUI::CreateNewPrimaryLoad("LOAD CASE 1");
```

VBA Syntax

```
' Create a new primary load case numbered #1 and titled with "LOAD CASE 1", type of dead
       load.
Dim nSupport As VARIANT = OSLoadUI.CreateNewPrimaryLoad("LOAD CASE 1")
```

See also

OSLoadUI::GetLoadCaseTitle

OSLoadUI::GetLoadType

OSLoadUI::DeletePrimaryLoadCases

- CreateNewPrimaryLoadEx()

VARIANT OSLoadUI::CreateNewPrimaryLoadEx (const VARIANT FAR & varPrimaryLoadTitle,
const VARIANT FAR & varLoadType)

Creates new PRIMARY load case.

Parameters

[in] **varPrimaryLoadTitle** The primary load case string title.

[in] **varLoadType** Type of the load.

Value	Load Type	Value	Load Type
0	Dead	12	Traffic
1	Live	13	Temp
2	Roof Live	14	Imperfection
3	Wind	15	Accidental
4	Seismic-H	16	Flood
5	Seismic-V	17	Ice
6	Snow	18	Wind Ice
7	Fluids	19	Crane Hook
8	Soil	20	Mass
9	Rain	21	Gravity
10	Ponding	22	Push
11	Dust	23	None

Return values

<Val> **nLoadNo**.

-1 General error.

-8004 Fail to create load.

C++ Syntax

```
// Create a new primary load case numbered #1 and titled with "LOAD CASE 1", type of dead
       load.
VARIANT RetVal = OSLoadUI::CreateNewPrimaryLoadEx((LPCTSTR)"LOAD CASE 1", 0);
```

VBA Syntax

```
' Create a new primary load case numbered #1 and titled with "LOAD CASE 1", type of dead
       load.
Dim RetVal As VARIANT = OSLoadUI.CreateNewPrimaryLoadEx((LPCTSTR)"LOAD CASE 1", 0)
```

See also

OSLoadUI::GetLoadCaseTitle

OSLoadUI::GetLoadType

OSLoadUI::DeletePrimaryLoadCases

CreateNewPrimaryLoadEx2()

```
VARIANT OSLoadUI::CreateNewPrimaryLoadEx2 ( const VARIANT FAR & varPrimaryLoadTitle,
                                            const VARIANT FAR & varLoadType,
                                            long                nLoadCaseNo )
```

Creates new PRIMARY load case.

Parameters

[in] **varPrimaryLoadTitle** The primary load case string title.

[in] **varLoadType** Type of the load.

Value	Load Type	Value	Load Type
0	Dead	12	Traffic
1	Live	13	Temp
2	Roof Live	14	Imperfection
3	Wind	15	Accidental
4	Seismic-H	16	Flood
5	Seismic-V	17	Ice
6	Snow	18	Wind Ice
7	Fluids	19	Crane Hook
8	Soil	20	Mass
9	Rain	21	Gravity
10	Ponding	22	Push
11	Dust	23	None

[in] **nLoadCaseNo** The load case number.

Return values

<Val> nLoadNo.

0 Failed to create load.

C++ Syntax

```
// Create a new primary load case numbered #1 and titled with "LOAD CASE 1", type of dead
       load with load case 1.
VARIANT RetVal = OSLoadUI::CreateNewPrimaryLoadEx2((LPCTSTR)"LOAD CASE 1", 0, 1);
```

VBA Syntax

```
' Create a new primary load case numbered #1 and titled with "LOAD CASE 1", type of dead
       load with load case 1.
Dim RetVal As VARIANT = OSLoadUI.CreateNewPrimaryLoadEx2((LPCTSTR)"LOAD CASE 1", 0, 1)
```

See also

OSLoadUI::GetLoadCaseTitle

OSLoadUI::GetLoadType

OSLoadUI::DeletePrimaryLoadCases

◆ DeleteLoadList()

VARIANT OSLoadUI::DeleteLoadList (const VARIANT FAR & varLoadListIndex)

Deletes specified load list.

Parameters

[in] **varLoadListIndex** Load list index.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Deletes load list #1.
VARIANT RetVal = OSLoadUI::DeleteLoadList(1);
```

VBA Syntax

```
' Deletes load list #1.
Dim RetVal As VARIANT = OSLoadUI.DeleteLoadList(1)
```

See also

OSLoadUI::CreateLoadList

OSLoadUI::GetLoadListCount

OSLoadUI::GetLoadCountInLoadList

OSLoadUI::GetLoadsInLoadList

◆ DeletePrimaryLoadCases()

VARIANT OSLoadUI::DeletePrimaryLoadCases (const VARIANT FAR & varPrimaryLoadCaseNos,
const VARIANT FAR & varIsReferenceLoads)

Deletes specified Primary/Reference Load Cases.

Parameters

[in] **varPrimaryLoadCaseNos** Primary/Reference load case reference ID(s) (type - Long/Integer).

[in] **varIsReferenceLoads** If reference load case(s): **TRUE(1)** or **FALSE(0)** (type - Boolean/Long/Integer).

Return values

1 OK.

0 Failed to delete load(s)

C++ Syntax

```
// Delete reference primary load cases.
long RetVal = OSLoadUI::DeletePrimaryLoadCases(varPrimaryLoadCaseNos, TRUE);
```

VBA Syntax

```
Option Explicit
  Sub Main
      Dim objOpenStaad As Object
      Dim stdFile As String
      Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
      objOpenStaad.GetSTAADFile stdFile, "TRUE"
      If stdFile="" Then
          MsgBox"Bad"
          Set objOpenStaad = Nothing
          Exit Sub
      End If
      Dim Loadp(1) As Long
      Dim Loadr As Boolean
      Loadp(0)=11
      Loadp(1)=12
      Loadr=False
      Dim resVal As Boolean
      ' Delete primary load case No 11 and 12.
      resVal=objOpenStaad.Load.DeletePrimaryLoadCases(Loadp,Loadr)
      If(resVal)Then
         MsgBox"OK"
      Else
         MsgBox"Error"
      End If
      Set objOpenStaad=Nothing
  End Sub
```

See also

OSLoadUI::CreateNewPrimaryLoad

OSLoadUI::CreateNewReferenceLoad

OSLoadUI::DeleteReferenceLoadCases

◆ DeleteReferenceLoadCases()

VARIANT OSLoadUI::DeleteReferenceLoadCases (const VARIANT FAR & varReferenceLoadCaseNos)

Deletes specified Reference Load Cases.

Parameters

[in] **varReferenceLoadCaseNos** Reference load case reference ID(s) in VARIANT array,

Return values

1 OK.

0 Failed to delete load(s)

C++ Syntax

```
// Delete reference load cases.
long RetVal = OSLoadUI::DeleteReferenceLoadCases(varReferenceLoadCaseNos);
```

VBA Syntax

```
' Delete reference load case No. 13.
Dim bResult As VARIANT = OSLoadUI.DeleteReferenceLoadCases(13)
```

See also

OSLoadUI::CreateNewReferenceLoad

OSLoadUI::DeletePrimaryLoadCases

◆ GetActiveLoad()

VARIANT OSLoadUI::GetActiveLoad ( )

Returns the current load case number.

Return values

<Val> Active load case number ID.

-1 General error.

C++ Syntax

```
// Gets active load case number ID.
VARIANT nLoadNo = OSLoadUI::GetActiveLoad();
```

VBA Syntax

```
' Gets active load case number ID.
Dim nLoadNo As VARIANT = OSLoadUI.GetActiveLoad()
```

◆ GetAssignmentListForLoadType()

```
VARIANT OSLoadUI::GetAssignmentListForLoadType ( const VARIANT FAR & loadType,
                                                 const VARIANT FAR & loadIndex,
                                                 VARIANT FAR &       varList )
```

Gets the list of entities that have been assigned to a load command in the active load case (see function SetLoadActive). This command is identified as the LoadType, which has a defined reference number (see below) and an index number starting from 0. That is, if a load command has been defined 10 times in the load case, then index 0 identifies the first instance of the command and index 9 identifies the 10th. See function **GetLoadItemsCount()** to determine how many instances there are of the command in the active load case.

Parameters

`[in]` **loadType** Type of the load.

Value	LoadType	Value	LoadType
4000	SelfWeight	3275	Uniform Force (Physical)
3110	Nodal Load (Node)	3280	Uniform Moment (Physical)
3120	Nodal Load (Inclined)	3285	Concentrated Force (Physical)
3910	Nodal Load (Support Displacement)	3290	Concentrated Moment (Physical)
3210	Uniform Force	3295	Trapezoidal (Physical)
3220	Uniform Moment	3310	Pressure on full plate
3230	Concentrated Force	3310	Concentrated Load (Plate)
3240	Concentrated Moment	3310	Partial plate pressure load
3250	Linear Varying	3320	Trapezoidal (Plate)
3260	Trapezoidal	3322	Solid
3260	Hydrostatic	3710	Temperature
3620	Pre/Post Stress	3720	Strain
3810	Fixed End	3721	Strain Rate
3530	FloorLoadGroup	3410	Area
3554	OneWayFloorLoadGroup		

`[in]` **loadIndex** Load item index of specified load type (Zero based). Program counts the first instance starting from 0 if the same load type exists in a specified load case.

`[out]` **varList** Entities number ID(s) in VARIANT array.

Return values

<Val> Size of **varList**.

0 General error.

VBA Syntax

```
' Gets the ID list of entities assigned with Joint Load (Load Type 3110) from load item 1
       (second joint load item, because loadIndex from 0) in avtive Load Case.
Option Explicit
  Sub Main
       Dim objOpenStaad As Object
       Dim stdFile As String

       Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
       objOpenStaad.GetSTAADFile stdFile, "TRUE"
       If stdFile="" Then
           MsgBox"Bad"
           Set objOpenStaad = Nothing
           Exit Sub
       End If
       Dim loadType As Long
       Dim loadIndex As Long
       Dim varList() As Long
       Dim nEntities As Long
       Dim ArraySize As Long
       Dim RetVal2 As Variant
       Dim ActiveLoadNo As Long
       ActiveLoadNo = 1
       RetVal2 = objOpenStaad.Load.SetLoadActive(ActiveLoadNo)
       loadType = 3110
       loadIndex = 1
       ArraySize = objOpenStaad.Load.GetListSizeForLoadType(loadType,loadIndex)
       ReDim varList(ArraySize-1)
       nEntities = objOpenStaad.Load.GetAssignmentListForLoadType(loadType, loadIndex,
        varList)
       MsgBox("Result is " & nEntities)
       Set objOpenStaad = Nothing
  End Sub
```

See also

OSLoadUI::GetLoadTypeCount

◆ GetAttribute()

long OSLoadUI::GetAttribute (long lLoadCase)

Gets load attribute information of specified load case.

Parameters

[in] **lLoadCase** Load case reference ID.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Get load attribute information specified by load case #1.
long RetVal = OSLoadUI::GetAttribute(1);
```

VBA Syntax

```
' Get load attribute information specified by load case #1.
Dim RetVal As long = OSLoadUI.GetAttribute(1)
```

See also

OSLoadUI::SetASDLoadAttribute

OSLoadUI::SetLSDLoadAttribute

OSLoadUI::RemoveAttribute

◆ GetListSizeForLoadType()

long OSLoadUI::GetListSizeForLoadType (int loadType,
int loadIndex)

Gets number of entities to vwhich specified Load Type and load index.

Parameters

[in] **loadType** Type of the load.

Value	LoadType	Value	LoadType
4000	SelfWeight	3275	Uniform Force (Physical)
3110	Nodal Load (Node)	3280	Uniform Moment (Physical)
3120	Nodal Load (Inclined)	3285	Concentrated Force (Physical)
3910	Nodal Load (Support Displacement)	3290	Concentrated Moment (Physical)
3210	Uniform Force	3295	Trapezoidal (Physical)
3220	Uniform Moment	3310	Pressure on full plate
3230	Concentrated Force	3310	Concentrated Load (Plate)
3240	Concentrated Moment	3310	Partial plate pressure load
3250	Linear Varying	3320	Trapezoidal (Plate)
3260	Trapezoidal	3322	Solid
3260	Hydrostatic	3710	Temperature
3620	Pre/Post Stress	3720	Strain
3810	Fixed End	3721	Strain Rate
3530	FloorLoadGroup	3410	Area
3554	OneWayFloorLoadGroup		

[in] **loadIndex** Load item index of specified load type (Zero based). Program returns the first one start from loadIndex if exist the same load type in specified load case.

Return values

<Val> The number of entities.

VBA Syntax

```
' Number of the entities of first(index=0) SelfWeight(4000) in current active load case.
  Option Explicit
  Sub Main
       Dim objOpenStaad As Object
       Dim stdFile As String

       Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
       objOpenStaad.GetSTAADFile stdFile, "TRUE"
       If stdFile="" Then
           MsgBox"Bad"
```

```
            Set objOpenStaad = Nothing
            Exit Sub
        End If
        Dim loadType As Long
        Dim nIndex As Long
        Dim nEntitiesSize As Long
        Dim ActiveLoadNo As Long
        Dim RetVal2 As Variant
        ActiveLoadNo = 1
        RetVal2 = objOpenStaad.Load.SetLoadActive(ActiveLoadNo)
        loadType = 4000
        nIndex = 0
        nEntitiesSize = objOpenStaad.Load.GetListSizeForLoadType(loadType , nIndex)
        MsgBox("Result is " & nEntitiesSize)
        Set objOpenStaad = Nothing
    End Sub
```

◆ GetLoadCaseTitle()

VARIANT OSLoadUI::GetLoadCaseTitle (const VARIANT FAR & varLoadNo)

Returns title of the specified load case as a text string. Input 0 to retrieve title of current active load case or reference load case.

Parameters

[in] **varLoadNo** The load case string title.

Return values

<VARIANT> The load case string title.

NONE Load case **varLoadNo** not found.

C++ Syntax

```
// Gets the string title of load case #1
VARIANT szLoadCaseTitle = OSLoadUI::GetLoadCaseTitle(1);
```

VBA Syntax

```
' Gets the string title of load case #1
Dim szLoadCaseTitle As VARIANT = OSLoadUI.GetLoadCaseTitle(1)
```

See also

OSLoadUI::CreateNewPrimaryLoad

◆ GetLoadCountInLoadList()

VARIANT OSLoadUI::GetLoadCountInLoadList (const VARIANT FAR & varLoadListIndex)

Gets the number of load case(s) in specified load list.

Parameters

[in] **varLoadListIndex** Load list index.

Returns

The number of Load Case(s) in specified Load List.

C++ Syntax

```
// Gets the number of load case(s) in load list #1.
VARIANT nLoadCaseInLoadList = OSLoadUI::GetLoadCountInLoadList(1);
```

VBA Syntax

```
Option Explicit
    Sub Main
       Dim objOpenStaad As Object
       Dim stdFile As String

       ' launch STAAD.Pro application and open "US-1 Plane Frame with Steel Design.STD"
        file from the Samples folder

       Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
       objOpenStaad.GetSTAADFile stdFile, "TRUE"
       If stdFile="" Then
         MsgBox"Bad"
         Set objOpenStaad = Nothing
         Exit Sub
       End If

       ' declare variables
       Dim loadListCount As Long
       Dim loadCountInLoadList As Long
       Dim loadListIndex As Long

      ' initialize variables
      ' load list index
      loadListIndex = 1

       loadListCount = objOpenStaad.Load.GetLoadListCount()

       ' Gets the number of load case(s) in load list.
       loadCountInLoadList = objOpenStaad.Load.GetLoadCountInLoadList(loadListIndex)
        Set objOpenStaad = Nothing
    End Sub
```

See also

OSLoadUI::CreateLoadList

OSLoadUI::GetLoadListCount

OSLoadUI::GetLoadsInLoadList

OSLoadUI::DeleteLoadList

GetLoadItemsCount()

VARIANT OSLoadUI::GetLoadItemsCount (long nLoadCaseNo)

Returns the number of loaditems in the specified load case.

Parameters

[in] **loadCaseNo** Load case number.

Return values

-1 General error.

C++ Syntax

```
// Load Case #1.
long RetVal = OSLoadUI::GetLoadItemsCount(1);
```

VBA Syntax

```
Option Explicit

  Sub Main
      Dim objOpenStaad As Object
      Dim stdFile As String

      Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
      objOpenStaad.GetSTAADFile stdFile, "TRUE"
      Dim rCount As Long

      rCount = objOpenStaad.load.GetLoadItemsCount(1)

End Sub
```

GetLoadItemType()

VARIANT OSLoadUI::GetLoadItemType (long nLoadCaseNo,
long nLoadItemIndex)

Returns the load item type for the specified loadIndex and loadCase.

Parameters

[in] **nloadCaseNo** Load case reference ID.

[in] **nloadItemIndex** Load item index (Zero based).

Value	LoadItem Type	Value	LoadItem Type
4000	SelfWeight	3520	FloorLoadZrange
3110	Nodal Load (Node)	3530	FloorLoadGroup
3120	Nodal Load (Inclined)	3551	OneWayFloorLoadXrange
3910	Nodal Load (Support Displacement)	3552	OneWayFloorLoadYrange
3312	Nodal Load (Region node load)	3553	OneWayFloorLoadZrange
3210	Uniform Force	3554	OneWayFloorLoadGroup
3220	Uniform Moment	3310	Pressure on full plate
3230	Concentrated Force	3311	Concentrated Load (Plate)
3240	Concentrated Moment	3312	Partial plate pressure load
3250	Linear Varying	3320	Trapezoidal (Plate)
3260	Trapezoidal	3322	Solid
3261	Hydrostatic	3710	Temperature
3620	Pre/Post Stress	3720	Strain
3810	Fixed End	3721	Strain Rate
3275	Uniform Force (Physical)	4400	UBC Load
3280	Uniform Moment (Physical)	4600	Wind Load
3285	Concentrated Force (Physical)	4610	Wind Load Dynamic
3290	Concentrated Moment (Physical)	4405	IbcLoad
3295	Trapezoidal (Physical)	4410	1893Load
3410	Area	4500	AijLoad
3510	FloorLoadYrange	4510	ColombianLoad
3511	FloorLoadXrange	4520	CFELoad
4570	TurkishLoad	4530	RPALoad
4575	GB50011Load	4540	NTCLoad
4576	Colombian2010Load	4550	NRCLoad
4820	TimeHistoryLoad	4560	NRCLoad2005

4651	Snow Load Data	4561	NRCLoad2010
4201	Repeat load data	4100	Spectrum Load
4223	Notional Load Data	4700	Calulate Natural Frequency
4220	Reference Load	4710	Modal Calculation Requested
4101	Spectrum Data	4222	Notional Load
4701	Calulate Rayleigh Frequency	4650	Snow Load
4200	Repeat load		

Return values

0 LoadCase/LoadItemIndex Not Found.

C++ Syntax

```
// loadCase #1 and loadItem #1.
long RetVal = OSLoadUI::GetLoadItemType(1, 0);
```

VBA Syntax

```
Option Explicit

  Sub Main
      Dim objOpenStaad As Object
      Dim stdFile As String

      Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
      objOpenStaad.GetSTAADFile stdFile, "TRUE"
      Dim IsEleLoad As Long

      IsEleLoad = objOpenStaad.load.GetLoadItemType(1, 0)

End Sub
```

◆ GetLoadListCount()

VARIANT OSLoadUI::GetLoadListCount ( )

Gets the number of existing load list(s)

Return values

<Val> The number of load list(s).

-1 General error.

C++ Syntax

```
// Gets the number of load list(s).
VARIANT nLoadList = OSLoadUI::GetLoadListCount();
```

VBA Syntax

```
Option Explicit

    Sub Main
       Dim objOpenStaad As Object
       Dim stdFile As String

       ' launch STAAD.Pro application and open "US-1 Plane Frame with Steel Design.STD"
        file from the Samples folder
       Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
       objOpenStaad.GetSTAADFile stdFile, "TRUE"
       If stdFile="" Then
         MsgBox"Bad"
         Set objOpenStaad = Nothing
         Exit Sub
       End If

       ' declare variables
      Dim loadListCount As Long

      ' Gets the number of load list(s).
       loadListCount = objOpenStaad.Load.GetLoadListCount()
    End Sub
```

See also

OSLoadUI::CreateLoadList

OSLoadUI::GetLoadCountInLoadList

OSLoadUI::GetLoadsInLoadList

OSLoadUI::DeleteLoadList

◆ GetLoadsInLoadList()

VARIANT OSLoadUI::GetLoadsInLoadList (const VARIANT FAR & varLoadListIndex,
const VARIANT FAR & varLoadList)

Gets the load case(s) in specified load list.

Parameters

[in] **varLoadListIndex** Load list index(Starts from one).

[out] **varLoadList** Load Case reference ID(s) VARIANT array.

Return values

1 / true Successful.

0 / false Failed.

C++ Syntax

```
// Gets load case(s) in load list #1.
VARIANT RetVal = OSLoadUI::GetLoadsInLoadList(1, &varLoadList);
```

.

VBA Syntax

```
Option Explicit
    Sub Main
       Dim objOpenStaad As Object
       Dim stdFile As String

       ' launch STAAD.Pro application and open "US-1 Plane Frame with Steel Design.STD"
        file from the Samples folder

       Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
       objOpenStaad.GetSTAADFile stdFile, "TRUE"
       If stdFile="" Then
         MsgBox"Bad"
         Set objOpenStaad = Nothing
         Exit Sub
       End If

       ' declare variables
       Dim loadListCount As Long
       Dim loadCountInLoadList As Long
       Dim loadListIndex As Long
       Dim loadArr() As Long
       Dim RetVal As Variant

       loadListCount = objOpenStaad.Load.GetLoadListCount()
       For loadListIndex = 1 To loadListCount
       loadCountInLoadList = objOpenStaad.Load.GetLoadCountInLoadList(loadListIndex)
       ReDim loadArr(loadCountInLoadList - 1)

       ' call method GetLoadsInLoadList
       RetVal = objOpenStaad.Load.GetLoadsInLoadList (loadListIndex,loadArr)
       Next loadListIndex
```

```
    Set objOpenStaad = Nothing
End Sub
```

See also

- **OSLoadUI::CreateLoadList**
- **OSLoadUI::GetLoadListCount**
- **OSLoadUI::GetLoadCountInLoadList**
- **OSLoadUI::DeleteLoadList**

◆ GetLoadType()

VARIANT OSLoadUI::GetLoadType (const VARIANT FAR & varLoadNo)

Returns primary load case category(s) as an long value.

Parameters

[in] **varLoadNo** Primary load case reference ID. Pass in 0 to get information about current active load case or reference load case

Return values

0 Dead.

1 Live.

2 Roof Live.

3 Wind.

4 Seismic-H.

5 Seismic-V.

6 Snow.

7 Fluids.

8 Soil.

9 Rain.

10 Ponding.

11 Dust.

12 Traffic.

13 Temperature.

14 Imperfection.

15 Accidental.

16 Flood.

17 Ice.

18 Wind Ice.

19 Crane Hook.

20 Mass.

21 Gravity.

22 Push.

23 None.

-1 General error.

C++ Syntax

```
// Get the type of primary load case #1.
VARIANT nLoadType = OSLoadUI::GetLoadType(1);
```

VBA Syntax

```
' Get the type of primary load case #1.
Dim nLoadType As VARIANT = OSLoadUI.GetLoadType(1)
```

See also

OSLoadUI::CreateNewPrimaryLoad

GetLoadTypeCount()

long OSLoadUI::GetLoadTypeCount (int loadType)

Gets the number of load(s) with specified Load Type in active Load Case.

Parameters

[in] **loadType** Type of the load.

Value	LoadType	Value	LoadType
4000	SelfWeight	3275	Uniform Force (Physical)
3110	Nodal Load (Node)	3280	Uniform Moment (Physical)
3120	Nodal Load (Inclined)	3285	Concentrated Force (Physical)
3910	Nodal Load (Support Displacement)	3290	Concentrated Moment (Physical)
3210	Uniform Force	3295	Trapezoidal (Physical)
3220	Uniform Moment	3310	Pressure on full plate
3230	Concentrated Force	3310	Concentrated Load (Plate)
3240	Concentrated Moment	3310	Partial plate pressure load
3250	Linear Varying	3320	Trapezoidal (Plate)
3260	Trapezoidal	3322	Solid
3260	Hydrostatic	3710	Temperature
3620	Pre/Post Stress	3720	Strain
3810	Fixed End	3721	Strain Rate
3530	FloorLoadGroup	3410	Area
3554	OneWayFloorLoadGroup		

Return values

<Val> the number of load(s).

0 Load Case **loadCaseNo** not found.

VBA Syntax

```
' Counts the SelfWeight item(s) in active load case.
  Option Explicit
  Sub Main
       Dim objOpenStaad As Object
       Dim stdFile As String

       Set objOpenStaad = GetObject(,"StaadPro.OpenSTAAD")
       objOpenStaad.GetSTAADFile stdFile, "TRUE"
       If stdFile="" Then
           MsgBox"Bad"
           Set objOpenStaad = Nothing
           Exit Sub
       End If
```

```
        Dim loadType As Long
        Dim nLoadSize As Long
        Dim ActiveLoadNo As Long
        Dim RetVal2 As Variant
        ActiveLoadNo = 1
        RetVal2 = objOpenStaad.Load.SetLoadActive(ActiveLoadNo)
        loadType = 4000
        nLoadSize = objOpenStaad.Load.GetLoadTypeCount(loadType)
        MsgBox("Result is " & nLoadSize)
        Set objOpenStaad = Nothing
    End Sub
```

GetPrimaryLoadCaseNumbers()

VARIANT OSLoadUI::GetPrimaryLoadCaseNumbers (VARIANT FAR & lCases)

Gets all primary load case numbers.

Parameters

[out] **lCases** The load case reference number ID(s) VARIANT array.

Return values

<Val> The number of primary load case(s).

-1 General error.

-106 1 dimensional array of VARIANT expected.

-114 OLE Exception Occurred.

C++ Syntax

```
// Get primary load case(s) refs.
VARIANT nPrimaryLoadCase = OSLoadUI::GetPrimaryLoadCaseNumbers(&lCases);
```

VBA Syntax

```
' Get primary load case(s) refs.
Dim nPrimaryLoadCase As VARIANT = OSLoadUI.GetPrimaryLoadCaseNumbers(&lCases)
```

RemoveAttribute()

long OSLoadUI::RemoveAttribute (long lLoadCase)

Removes the load attribute specified by lLoadCase.

Parameters

[in] **lLoadCase** Load case reference ID.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Remove load attribute to which load case #1 is belong.
long RetVal = OSLoadUI::RemoveAttribute(1);
```

VBA Syntax

```
' Remove load attribute to which load case #1 is belong.
Dim RetVal As long = OSLoadUI.RemoveAttribute(1)
```

See also

OSLoadUI::SetASDLoadAttribute

OSLoadUI::SetLSDLoadAttribute

OSLoadUI::GetAttribute

◆ SetASDLoadAttribute()

```
long OSLoadUI::SetASDLoadAttribute ( long          nLoadCase,
                                     StrengthType I,
                                     bool          bIncrease )
```

Sets Allowable Stress Design (ASD) load attribute.

Parameters

[in] **nLoadCase** Load case reference ID.

[in] **I** Strength Type:

Value
STRENGTH_TYPE_NONE = 0
NORMAL_ASD_WORKING_STRESS_FORCES_WITHOUT_P_DELTA = 1
NORMAL_ASD_WORKING_STRESS_FORCES_WITH_P_DELTA = 2
STRENGTH_TYPE_OF_FORCES_WITHOUT_P_DELTA = 3
STRENGTH_TYPE_OF_FORCES_WITH_P_DELTA = 4
COLUMN_ONLY_STRENGTH_TYPE_OF_FORCES_WITHOUT_P_DELTA = 5
COLUMN_ONLY_STRENGTH_TYPE_OF_FORCES_WITH_P_DELTA = 6

[in] **bIncrease** Allow 1/3 stress increase in ASD: **FALSE** or **TRUE**.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Set ASD Load attribute with load case #1 include, assuming stress increase in ASD not
       allowed and strength type of forces with pdelta.
long RetVal = OSLoadUI::SetASDLoadAttribute(1, STRENGTH_TYPE_OF_FORCES_WITH_P_DELTA,
       FALSE);
```

VBA Syntax

```
' Set ASD Load attribute with load case #1 include, assuming stress increase in ASD not
       allowed and strength type of forces with pdelta.
Dim RetVal As long = OSLoadUI.SetASDLoadAttribute(1,
       STRENGTH_TYPE_OF_FORCES_WITH_P_DELTA, FALSE)
```

See also

OSLoadUI::SetLSDLoadAttribute

OSLoadUI::RemoveAttribute

OSLoadUI::GetAttribute

SetLoadType()

VARIANT OSLoadUI::SetLoadType (const VARIANT FAR & varLoadNo,
const VARIANT FAR & varLoadType)

Set load type to load case(s) for considering load combination.

Parameters

[in] **varLoadNo** The load case reference number ID(s) VARIANT array.

[in] **varLoadType** Type of the load.

Value	Load Type	Value	Load Type
0	Dead	12	Traffic
1	Live	13	Temp
2	Roof Live	14	Imperfection
3	Wind	15	Accidental
4	Seismic-H	16	Flood
5	Seismic-V	17	Ice
6	Snow	18	Wind Ice
7	Fluids	19	Crane Hook
8	Soil	20	Mass
9	Rain	21	Gravity
10	Ponding	22	Push
11	Dust	23	None

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Set temperature load type to load case(s) \b varLoadNo.
VARIANT RetVal = OSLoadUI::SetLoadType(varLoadNo, 12);
```

VBA Syntax

```
' Set temperature load type to load case(s) \b varLoadNo.
Dim RetVal As VARIANT = OSLoadUI.SetLoadType(varLoadNo, 12)
```

SetLSDLoadAttribute()

long OSLoadUI::SetLSDLoadAttribute (long nLoadCase)

Sets Limit State Design (LSD) load attribute.

Parameters

[in] **nLoadCase** Load case reference ID.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Set LSD load attribute with load case #1 included.
long RetVal = OSLoadUI::SetLSDLoadAttribute(1);
```

VBA Syntax

```
' Set LSD load attribute with load case #1 included.
Dim RetVal As long = OSLoadUI.SetLSDLoadAttribute(1)
```

See also

OSLoadUI::SetASDLoadAttribute

OSLoadUI::RemoveAttribute

OSLoadUI::GetAttribute