

## 1. Hello world

```
[> restart
=> with(Maplets[Elements]) :
=> Maplets[Display](Maplet(["Hello world"]))
```

2 .

```
[> restart
=> with(Maplets[Elements]) :
=> maplet2a := Maplet(["Hello world", Button("OK", Shutdown( ))]) :
Maplets[Display](maplet2a)
```

3 .

```
[ , ( ),
.
=> restart
=> with(Maplets[Elements]) :
=> maplet2b := Maplet(["Hello world", Button("OK", Shutdown( ))]) :
Maplets[Display](maplet2b)
```

4 .

```
'title' = "Заголовок"
=> restart
=> with(Maplets[Elements]) :
=> maplet3 := Maplet(Window('title' = "Заголовок", ["Hello world", Button("OK",
Shutdown( ))])) :
Maplets[Display](maplet3)
```

5 .

## TextField

```
[> restart;
=> with(Maplets[Elements]) :
=> maplet4 := Maplet(Window('title' = " ", [
"Enter something:",
TextField['TF1'](),
[Button("OK", Shutdown(['TF1'])), Button("Clear", SetOption
('TF1' = ""))])
]) :
Maplets[Display](maplet4 );
```

[ "" ]

(5.1)

6 .

## Maplet

```
[> restart;
=> with(Maplets[Elements]) :
=> maplet5 := Maplet(Window('title' = " ", [
["Integrand: ", TextField['TF1']()],
["Variable of Integration: ", TextField['TF2'](3)],
```

```

    TextBox['TB1']('editable' = 'false', 3..40 ),
    [Button("Integrate", Evaluate('TB1' = 'int(TF1, TF2)')),
    Button("OK", Shutdown(['TF1', 'TF2', 'TB1'])),
    Button("Clear", SetOption('TF1' = ""))]
  ] ) ):
Maplets[Display]( maplet5 );

```

7 . *Get('TF1':: algebraic);*

Процедура Get проверяет, выполняется ли анализ аргумента и имеет ли он соответствующий тип.

```

[> restart;
[> with(Maplets[Elements]):
> MyInt := proc()
    local integrand, var;

    use Maplets[Tools] in
        integrand := Get( 'TF1'::algebraic );
        var := Get( 'TF2'::name );
    end use;

    int( integrand, var );
end proc;
> maplet6 := Maplet( Window( 'title'="          ", [
    ["Integrand: ", TextField['TF1']()],
    ["Variable of Integration: ", TextField['TF2'](3)],
    TextBox['TB1']('editable' = 'false', 3..40 ),
    [Button( "Integrate", Evaluate('TB1' = "MyInt" ) ),
    Button( "OK", Shutdown(['TF1', 'TF2', 'TB1'] ) ),
    Button( "Clear", SetOption('TF1' = "" ) ) ]
  ] ) ):
Maplets[Display]( maplet6 );

```

8 .

```

[> restart;
[> with(Maplets[Elements]):
> maplet7 := Maplet( Window( 'title'="7th", BoxColumn('vscroll'='
'always',
    ["Integrand: ", TextField['TF1']()],
    ["Variable of Integration: ", TextField['TF2'](3)],
    TextBox['TB1']('editable' = 'false', 3..40 ),
    Plotter['PL1'](),
    Slider['SL1']( 0..20, 5, 'showticks', 'majorticks'=5,
'minorticks'=1, 'visible'='false', Evaluate( 'PL1' = 'plot([TF1,
TB1], TF2=0..SL1)' ) ),
    [Button("Integrate", Action(Evaluate('TB1' = 'int(TF1, TF2)
'), SetOption('B1'(enabled)='true'))),
    Button("OK", Shutdown(['TF1', 'TF2', 'TB1'])),
    Button("Clear", Action(SetOption('TF1' = ""), SetOption
('TF2' = ""), SetOption('TB1' = ""), SetOption('B1'(enabled)=
'false'), SetOption('SL1'('visible')='false'), Evaluate( 'PL1' =
'plot(undefined, x=0..SL1)' ))),
    Button("Help", RunDialog('MD1')),
    Button['B1']("Plot", 'enabled'='false', Action( SetOption

```

```

('SL1('visible')='true'), Evaluate( 'PL1' = 'plot([TF1, TB1],
TF2=0..SL1)' ) ) )
) ),
    MessageDialog['MD1']( "An expression which, being
integrated, produces a given integral.", 'type'='information' ) )
:
Maplets[Display](maplet7);

```

9 .

```

[> restart
[> with(Maplets[Elements]) :
[>

```

```

[> Maplets[Display]( Maplet( [Button("OK", Shutdown( ))] ) );

```

```

[> Maplets[Display]( Maplet( [
    [[CheckBox['ChB1']('value'='true'), CheckBox['ChB2']('value'='false'), ]],
    [Button("OK", Shutdown(['ChB1']) )]
] ) );

```

["true"] (9.2.1)

## ComboBox

```

[> Maplets[Display]( Maplet( [
    ComboBox['CoB1']('value'="blue", ["red", "orange", "yellow", "green", "blue", "violet"] ),
    Button("OK", Shutdown(['CoB1']))
] ) );

```

["orange"] (9.3.1)

## DropDownBox

```

[> Maplets[Display]( Maplet( [
    DropDownBox['DDB1']('value'="Victoria", [
        "Victoria", "Edmonton", "Regina", "Winnipeg", "Toronto", "Quebec City",
        "Fredericton", "Halifax", "Charlottetown", "St. John's", "Whitehorse",

```

```

    "Yellowknife", "Iqaluit" ] ),
    Button("OK", Shutdown( [ 'DDBI' ] ))
  ] ) );

```

["Toronto"]

(9.4.1)

## Label

```

> Maplets[Display]( Maplet( [
    "Standard text 12345",
    Label( "Italicized text", 'font' = Font( helvetica, bold, 25 ) ),
    Button("OK", Shutdown( ) )
  ] ) );

```

## ListBox

```

, [ C t r l ], .

```

```

> result := Maplets[Display]( Maplet( [
    ListBox['LBI']( 'value' = "Victoria", [
      "Victoria", "Edmonton", "Regina", "Winnipeg", "Toronto", "Quebec City",
      "Fredericton", "Halifax", "Charlottetown", "St. John's", "Whitehorse",
      "Yellowknife", "Iqaluit" ] ),
    Button("OK", Shutdown( [ 'LBI' ] ))
  ] ) ) :

```

**if result ≠ NULL then**

```

  Maplets[Tools][ListBoxSplit]( result[1] );

```

**end if;**

["Regina", "Whitehorse", "Iqaluit"]

(9.6.1)

## MathMLViewer

```

> Maplets[Display]( Maplet( [
    "Enter some expression to display in MathML:",
    TextField['TF1']( ),
    MathMLViewer['MMLVI']( 'value' = x^2 - 4 * x + 3 ),
    [ Button("Display", Evaluate( 'MMLVI' = 'MathML[Export](TF1)' ) ), Button("OK",
      Shutdown( ) ) ]
  ] ) );

```

## Plotter

```
> Maplets[Display]( Maplet( [
  "Enter some expression to plot on x=0..10:",
  TextField['TF1']('value' = x^2 - 4*x + 3),
  Plotter['PL1']('value' = plot( x^2 - 4*x + 3, x=0..10 ) ),
  [Button("Display", Evaluate('PL1' = 'plot(TF1, x=0..10)' ) ), Button("OK", Shutdown( ))]
] ) );
```

## RadioButton

```
> Maplets[Display]
  (Maplet([
    [RadioButton['RB1']("1st", true, 'group' = BG1), RadioButton
    ['RB2']("2nd", 'group' = 'BG1')], [Button("OK", Shutdown(['RB1',
    'RB2'])), ButtonGroup['BG1']()]);
    ["true", "false"] (9.9.1)
```

## Slider

```
> Maplets[Display]( Maplet( [
  "Select an integer:",
  Slider['SL1']( 10, 0..20, 'majorticks'= 10, 'minorticks'= 2, 'showticks' ),
  Button("OK", Shutdown(['SL1']))
] ) );
```

## Table

```
> IL := [sin(x), cos(x), tan(x), sec(x), csc(x), cot(x)]:

Maplets[Display]( Maplet( [
  Table( ["integrand", "integral"], [seq( [i, int( i, x )], i = IL ) ], 'width'= 400 ),
  Button("OK", Shutdown( ))
] ) );
```

## TextBox

```
> restart;
> with(Maplets[Elements]); maplet := Maplet(["Enter text: ",
  BoxCell(TextBox['IB1'](3 .. 30), 'as_needed'), [Button("OK",
```

```
Shutdown(['IB1'])), Button("Cancel", Shutdown()))]);Maplets
[Display](maplet);
["fgsdfvbzxcv zvxzx
cbxcbzxbz
xvezxvzvd"]
```

(9.12.1)

```
> restart;
> with(Maplets[Elements]):
> Maplets[Display]( Maplet( [
    "Enter an expression to integrate w.r.t. x:",
    [TextBox['TF1']('value' = x^2 - 4*x + 3)],
    [Button("Integrate", Evaluate( 'TF1' = 'int(TF1, x)' ) ) ],
    Button("OK", Shutdown(['TF1']))]
] ) );
["1/3*x^3"]
```

(9.12.2)

```
false.
> restart;
> with(Maplets[Elements]):
maplet := Maplet([
    [TextBox['IB1']('editable'='false', "This text is inside the
    TextBox. You cannot type in this box.")],
    [Button("OK", Shutdown(['IB1'])), Button("Cancel", Shutdown())
    ]
]);
Maplets[Display](maplet);
["This text is inside the TextBox. You cannot type in this box."]
```

(9.12.3)

## TextField

```
> restart;
> with(Maplets[Elements]):
> Maplets[Display]( Maplet( [
    "Enter an expression to integrate w.r.t. x:",
    TextField['TF1']('value' = x^2 - 4*x + 3),
    [Button("Integrate", Evaluate( 'TF1' = 'int(TF1, x)' ) ) ],
    Button("OK", Shutdown(['TF1']))] ) );
```

## ToggleButton

```
> Maplets[Display]( Maplet( [
    [ToggleButton['RB1']("1st", true ), ToggleButton['RB2']("2nd" ) ],
    Button("OK", Shutdown(['RB1', 'RB2']))) );
["false", "true"]
```

(9.14.1)

```
> Maplets[Display]( Maplet( AlertDialog(
    "Assuming x > 0 leads to a contradiction",
    'onapprove' = Shutdown('true'),
    'oncancel' = Shutdown("FAIL")
) ) );
```

"FAIL" (10.1.1)

### ColorDialog

```
> Maplets[Display]( Maplet( ColorDialog['CDI'](
    'onapprove' = Shutdown(['CDI']),
    'oncancel' = Shutdown( )
) ) );
```

["#FF3333"] (10.2.1)

### ConfirmDialog

```
> Maplets[Display]( Maplet( ConfirmDialog( 'question', "Is x > 0 ?",
    'onapprove' = Shutdown('true'),
    'ondecline' = Shutdown('false'),
    'oncancel' = Shutdown("FAIL")
) ) );
```

"FAIL" (10.3.1)

### FileDialog

```
> Maplets[Display]( Maplet( FileDialog['FDI'](
    'onapprove' = Shutdown(['FDI']),
    'oncancel' = Shutdown( )
) ) );
```

["C:\Users\Oleandr\Documents\Scanned Documents\Приветствие программы сканирования.jpg"] (10.4.1)

## InputDialog

```
> Maplets[Display]( Maplet(
  InputDialog['IDI']("Enter an integer",
    'onapprove'= Shutdown(['IDI']),
    'oncancel'= Shutdown( )
  )
) );
```

## MessageDialog

```
> Maplets[Display]( Maplet( MessageDialog(
  warning,
  "Contradictory assumptions on `x`",
  'onapprove'= Shutdown( )
) ) );
```

## QuestionDialog

```
> Maplets[Display]( Maplet( QuestionDialog("Is x > 0?",
  'onapprove'= Shutdown('true'),
  'ondecline'= Shutdown('false')
) ) );
```

"false"

(10.7.1)

## Menu

```
> restart;
> with(Maplets[Elements]):
> Maplets[Display]( Maplet(
  Window('title'="Integration and Differentiation", 'menubar'=
  'MB1', ["Enter an expression and select a command from the
  menu:", [TextField['TF1']()], Button("Exit", Shutdown("Closed from
  button", ['TF1'])))],
  MenuBar['MB1'](
    Menu("File", MenuItem("Close", Shutdown("Closed from
  menu", ['TF1']))),
    Menu("Commands",
      MenuItem("Integrate", Evaluate('TF1' = 'int(TF1, x)')
    )
  ),
```

```

    MenuSeparator ( ) ,
    MenuItem("Differentiate", Evaluate('TF1' = 'diff(TF1,
x) '))
)
) );
"Closed from button", ["" ]

```

**(11.1)**

## ToolBar

```

> Maplets[Display]( Maplet(
    Window('toolbar'='TB1', [ TextField['TF1'] ( ), Button("OK", Shutdown(['TF1']) ) ]),
    ToolBar['TB1'](
        ToolBarButton("Integrate", Evaluate('TF1' = 'int(TF1, x)') ),
        ToolBarSeparator ( ),
        ToolBarButton("Differentiate", Evaluate('TF1' = 'diff (TF1, x)'))
    )
) );
["2*x"]

```

**(12.1)**

## Window

```

> restart;
> with(Maplets[Elements]) :
maplet := Maplet('onstartup' = 'A1',
    Window['W1'] ("1",
        [Button("Run New Window", RunWindow('W2')),
        Button("Exit", Shutdown("1"))]
    ),
    Window['W2'] ("2",
        [Button("Close This Window", CloseWindow('W2')),
        Button("Exit", Shutdown("2"))]
    ),
    Action['A1'] (RunWindow('W1'))
):
Maplets[Display] (maplet);
"2"

```

**(13.1)**

## Evaluate

```

> Maplets[Display]( Maplet( [
    ["Enter an expression", TextField['TF1'] ('width' = 30) ],

```

```

[
  "Differentiate w.r.t. x:",
  Button("Calculate", Evaluate('TF1'='diff(TF1,x)'),
  Button("OK", Shutdown(['TF1']))
]
] ) );

```

## RunDialog

```

> Maplets[Display]( Maplet(
  Window([
    TextField['TF1'](),
    [
      Button("Diff w.r.t. x", Evaluate('TF1'='diff(TF1,x)'),
      Button("Help", RunDialog('MD1')),
      Button("OK", Shutdown(['TF1']))
    ]
  ]),
  MessageDialog['MD1']("See ?diff for help with the differentiation command")
) );

```

[ "" ]

(15.1)

## RunWindow

```

> restart;
> with(Maplets[Elements]):
maplet := Maplet('onstartup' = 'A1',
  Window['W1']('title' = "Select Method", 'layout' = 'BL0'),
  BoxLayout['BL0'](
    BoxColumn(
      BoxRow("Select a method"),
      BoxRow(
        Button("Differentiation", RunWindow('W2')),
        Button("Integration", RunWindow('W3'))
      )
    )
  ),
  Window['W2']('title'="Differentiation", [
    [
      "Enter an expression:",
      TextField['TF1']()
    ],
    [
      Button("Differentiate with respect to x", Evaluate('TF1'
= 'diff(TF1, x)'),
      Button("Exit", Shutdown(['TF1']))

```

```

    ]
  ),
  Window['W3'] ('title'="Integration", [
    [
      "Enter an integrand:",
      TextField['TF2'] ()
    ],
    [
      Button("Integrate with respect to x", Evaluate('TF2' =
'int(TF2, x)')),
      Button("Exit", Shutdown(['TF2']))
    ]
  ]),
  Action['A1'] (RunWindow('W1'))
):
Maplets[Display] (maplet);

```

["1/2\*x^2"] (16.1)

## SetOption

```

> Maplets[Display] ( Maplet( [
  "Enter some text:",
  TextField['B1'](20),
  TextField['B2'](20, 'editable'='false'),
  [
    Button("Clear 1st Field", SetOption('target'='B1', 'value'='')),
    Button("Copy to 2nd Field", SetOption('target'='B2', Argument('B1'))),
    Button("Return 2nd Field", Shutdown(['B2']))
  ]
] ) );

```

[""] (17.1)

## Shutdown

```

> Maplets[Display] (Maplet([ [Button("OK", Shutdown( )) ] ]));

```

## Layout Elements

### Box Layout

```

> Maplets[Display] ( Maplet(
  Window(["A", [{"B", "C"}, "D", [{"E", "F", "G"}, "H", "I"], "J"], Button("OK",
  Shutdown( )) ]))
) );

```

## Grid Layout

```
> Maplets[Display]( Maplet(
    Window( [GridLayout( [ ["A", "B"], ["C", "D"], ["E", "F"] ] ), Button("OK", Shutdown( )) ] )
);
```

## See Also

[Authoring Maplet Applications for MapleNet](#), [Maplets\[Elements\]](#), [Maplets Style Guide](#), [Overview of Maplet Applications](#)  
[Return to Index for Example Worksheets](#)