

1. ESSENTIALS OF VISUAL BASIC

Stremnev A.Y., 2018

Program

the sequence of actions which is written down in a special computer language

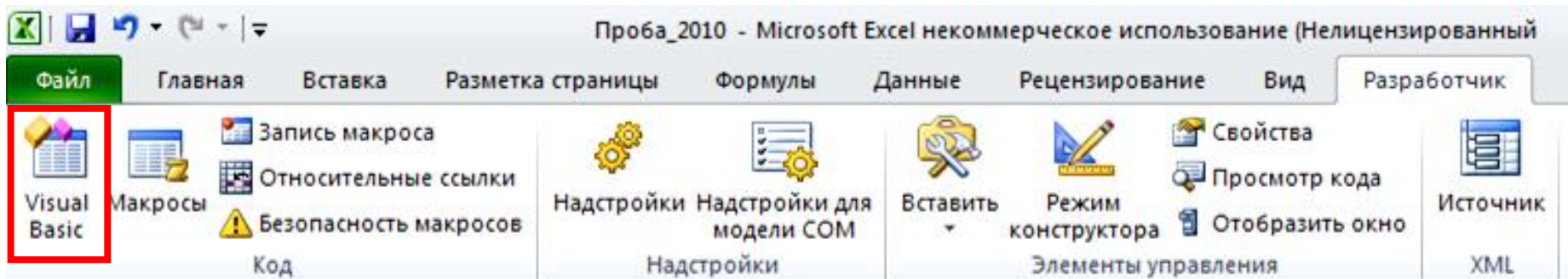
Visual Basic (VB)

one of computer languages for creation of programs (macroses)

DISPLAY OF THE ENVIRONMENT FOR WORK WITH VB (VBA) IN MS OFFICE:

MS Office > Разработчик > Код > Visual Basic

MS Office > Developer > Code > Visual Basic



DISPLAY OF DEVELOPER TAB

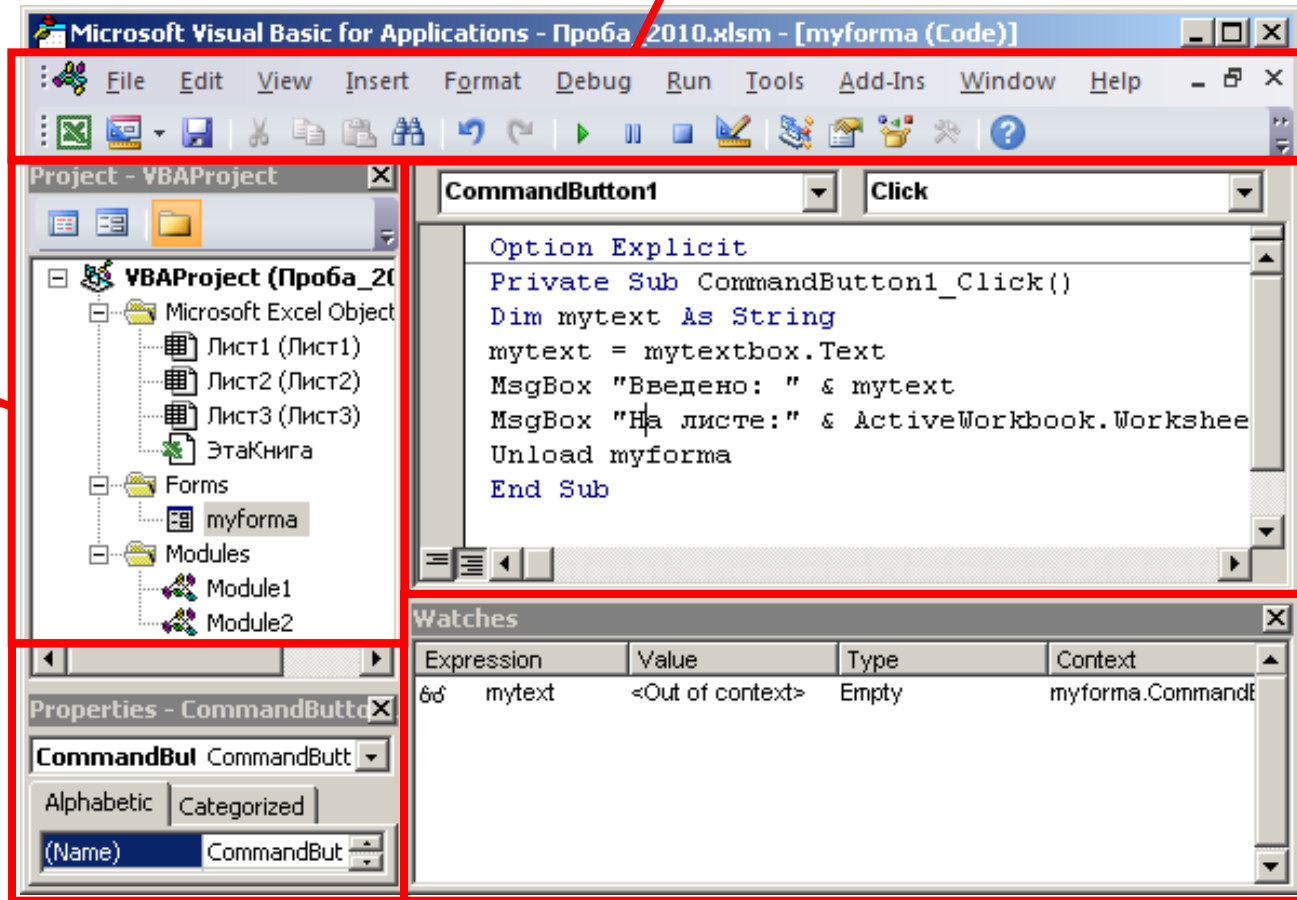
Ribbon > Right Click > Adjusting > Main tabs > Developer

1. ESSENTIALS OF VISUAL BASIC

1.1. ELEMENTS OF VB-ENVIRONMENT

Menu and toolbars

Project
Explorer
(Browser)



Work
space

Properties Window

Watch Window

DISPLAY OF THE ELEMENTS OF VB-WINDOW:

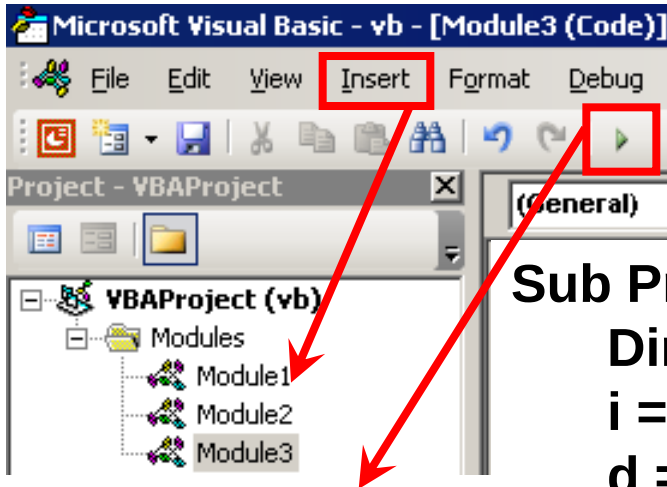
Visual Basic > View

1. ESSENTIALS OF VISUAL BASIC

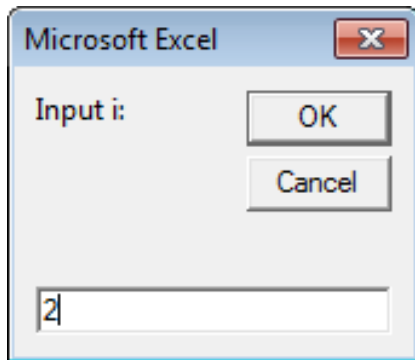
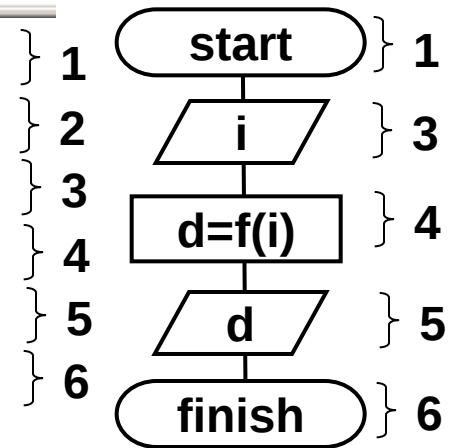
1.2. PROGRAM STRUCTURE IN VB-MODULE

ADDITION OF THE VB-PROGRAM MODULE:

Visual Basic > Insert > Module



```
Sub Program_1()  
    Dim i As Integer, d As Double  
    i = InputBox("Input i")  
    d = Abs(Sin(5 * i)) + 2 ^ i - Log(i)  
    MsgBox "d = " & d  
End Sub
```



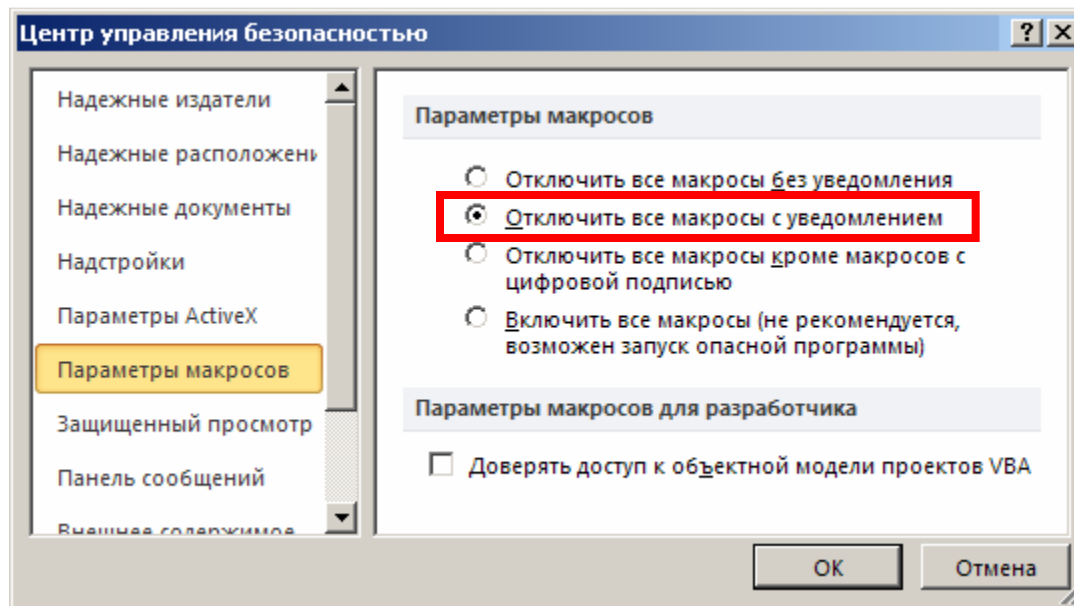
- 1 - Starting of program with name "Program_1"
- 2 - Creating of variables (preparation of memory)
- 3 - Initializing of variables (input values)
- 4 - "Useful actions" (data processing)
- 5 - Displaying of results
- 6 - Finish of program

1. ESSENTIALS OF VISUAL BASIC

1.3. PERMISSION TO LAUNCH PROGRAMS

**MS Office > Разработчик > Код >
> Безопасность макросов >
> Отключить с уведомлением**

**MS Office > Developer > Code >
> Safety of macroes >
> Blocking with the notice**



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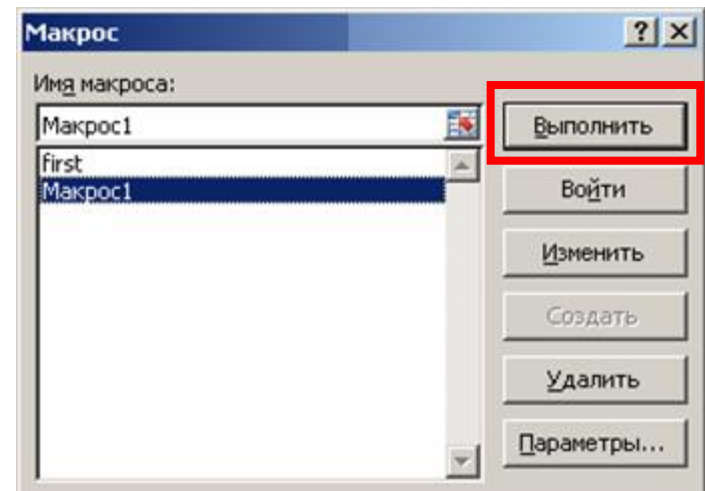
1.4. RUNNING AND SAVING OF VB-PROGRAMS

LAUNCH PROGRAM FROM VB-ENVIRONMENT:

Visual Basic > Run > Run Sub (F5)

LAUNCH PROGRAM FROM MS OFFICE:

MS Excel (Word) > Developer >
> Code > Macroes >
> (Selection of program) > Run



SAVING OF VB-PROGRAM:

MS Excel (Word) > File > Save As > (docxm/xlsxm) ... with macro

1. ESSENTIALS OF VISUAL BASIC

1.5. DEBUGGING VB-PROGRAM

Step by step running

user (programmer) gives permission to execute every next row in program

Visual Basic > Debug > Step Into (F8)

```
Sub primer()  
Dim i As Integer  
i = 2  
i = i + 3  
End Sub
```

→ F8 →

```
Sub primer()  
Dim i As Integer  
i = 2  
i = i + 3  
End Sub
```

→

→ F8 →

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Sub primer()  
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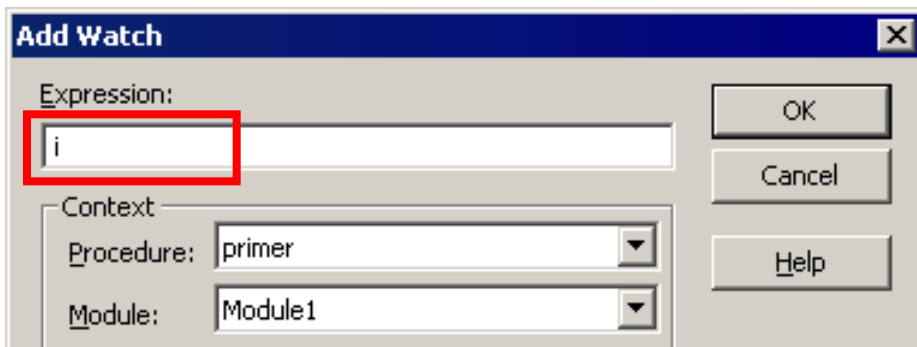
1. ESSENTIALS OF VISUAL BASIC

1.5. DEBUGGING VB-PROGRAM

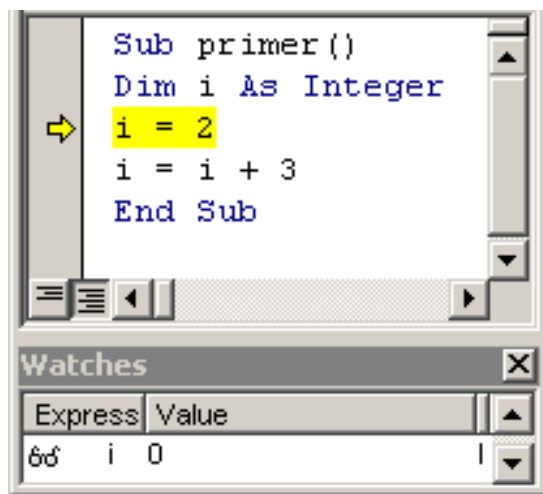
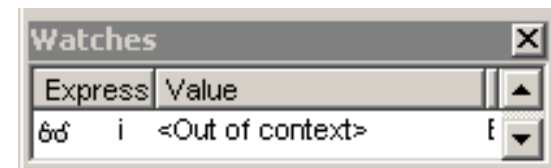
Watch values

display values of variables and expressions during step by step running of VB-program

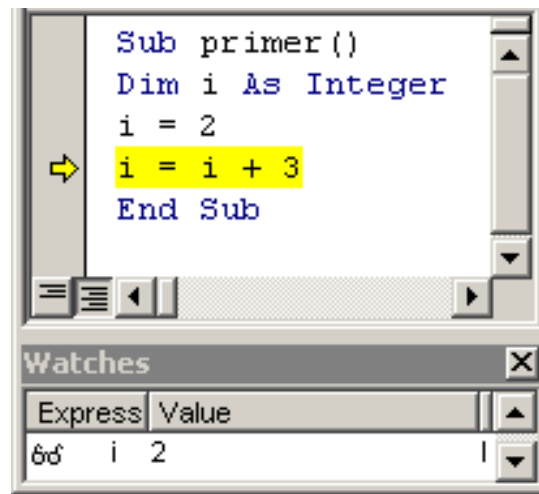
Visual Basic > (in active module) > Debug > Add Watch...



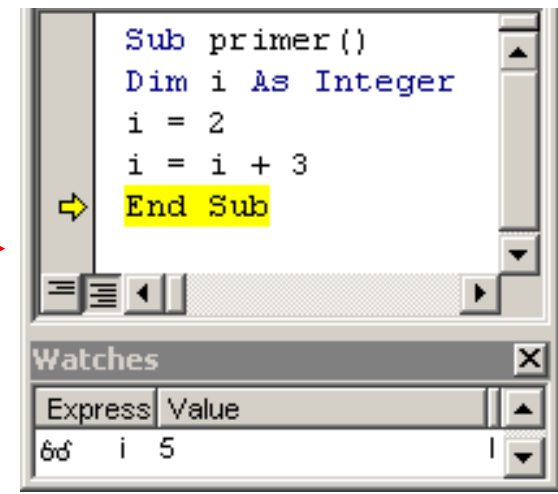
Watch Window



F8



F8



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1.5. DEBUGGING VB-PROGRAM

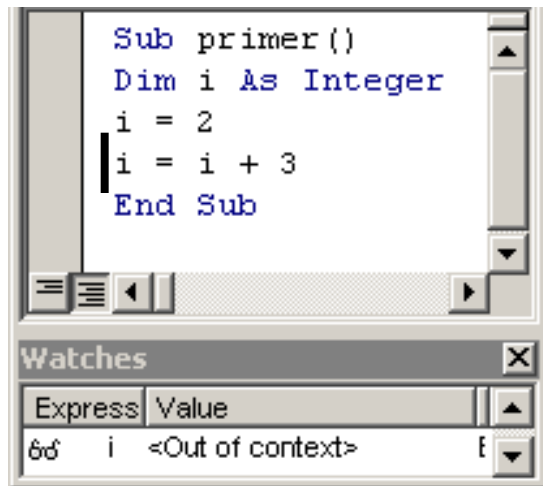
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BreakPoints

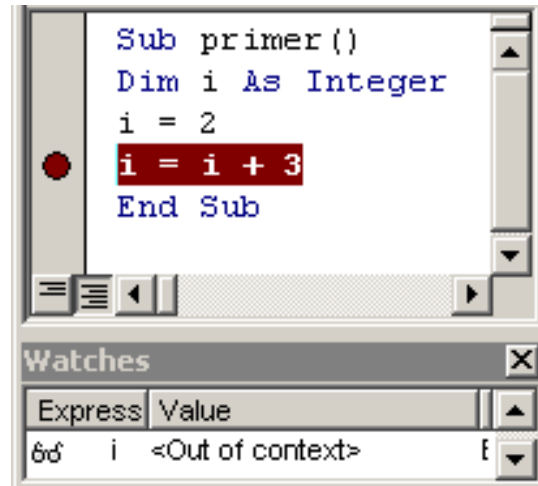
marks to stop of program running in special rows

Visual Basic > Debug > Toggle Breakpoint (F9)

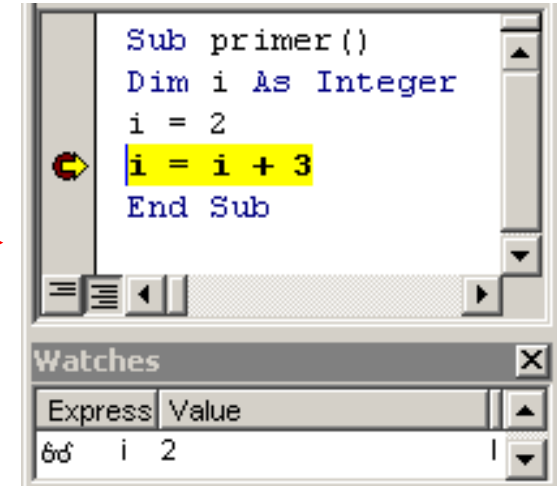
Adding of Breakpoint



F9



F5



F5



Continue of runnnig