Programming without coding technology

تكنولوجيا البرمجة بدون كود

(1) Mahmoud Programming Language

(2) RPWI Environment

(3) DoubleS (Super Server) Paradigm

(١) لغة البرمجة محمود

(٢) بيئة البرمجة بدون كود

(٣) نمط البرمجة الخادم الممتاز

Version 1.0
(Stable) Rev. 8

الاصدارة الاولى
المراجعة الثامنة

http://www.sourceforge.net/projects/doublesvsoop

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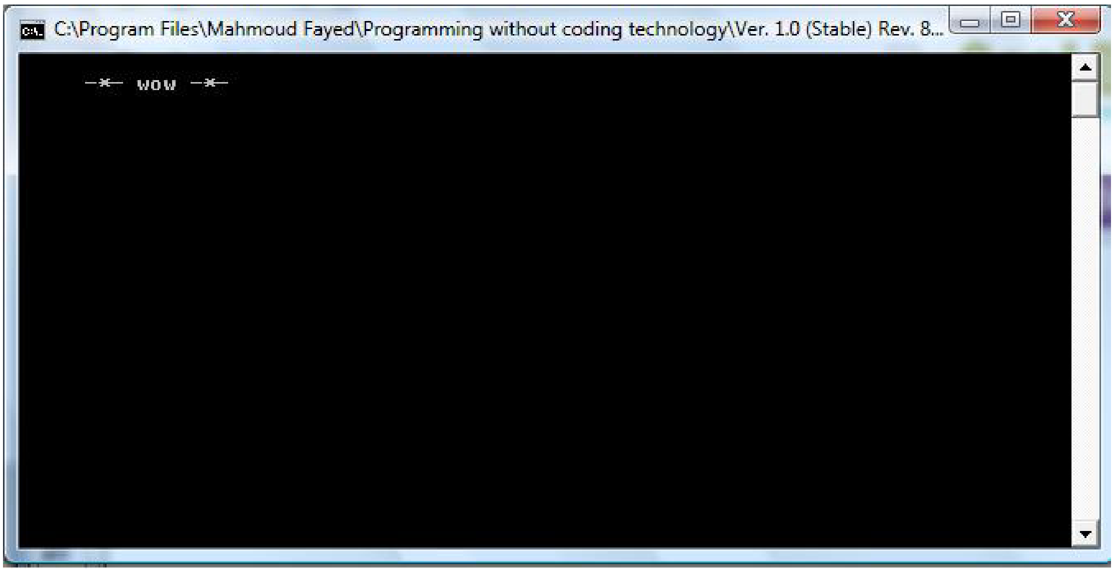


```
C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...
```

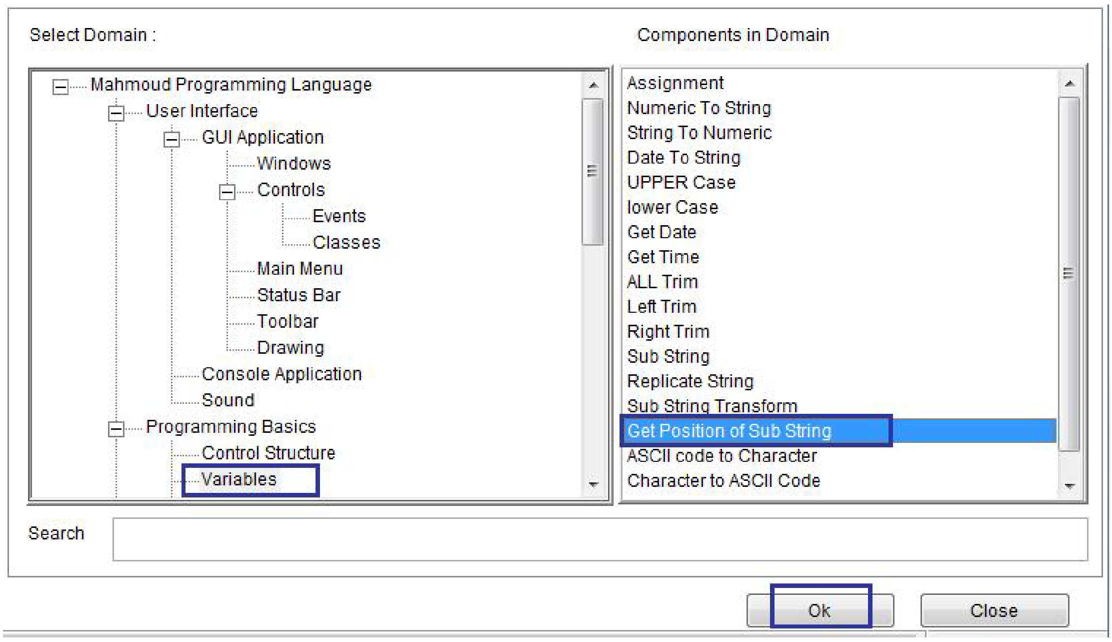
```
-*- wow -*-
```

The final Application

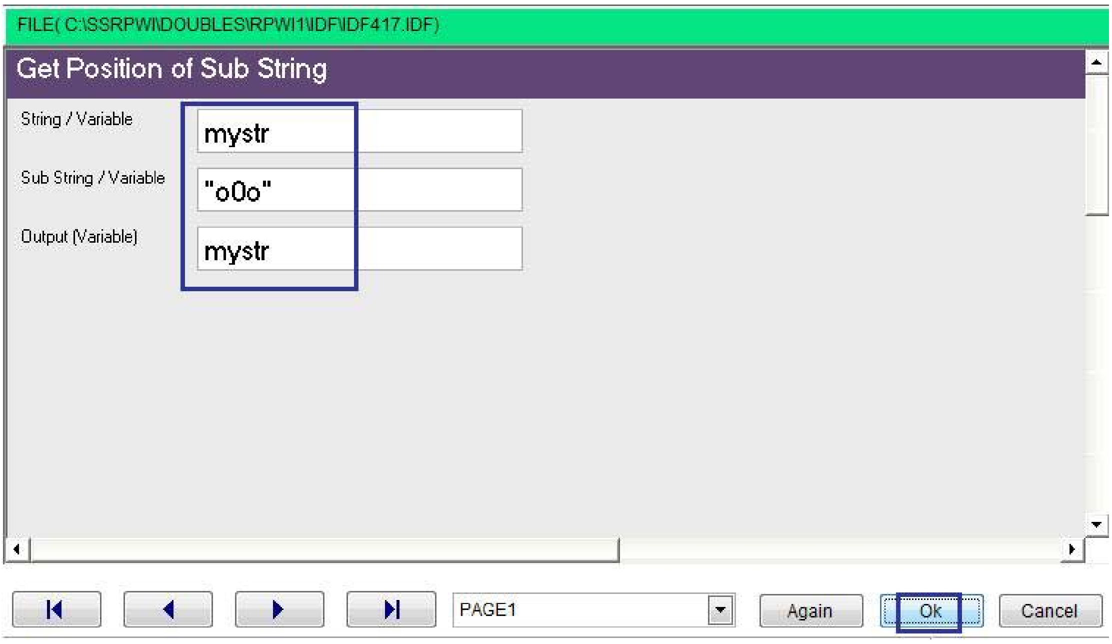
Get position of substring

Locates the position of a substring within a character string

Example – Screen Shots:



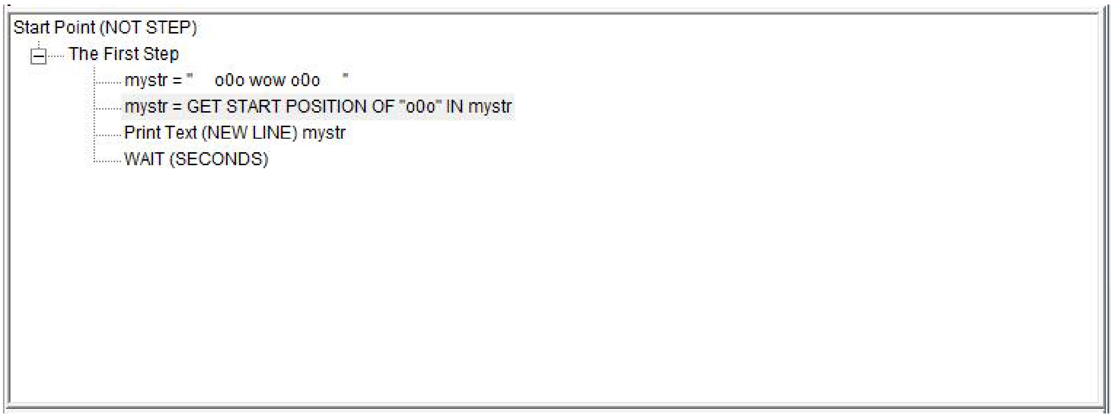
Domain (Variables) Component (Get Position of sub string)



Get Position of Sub String

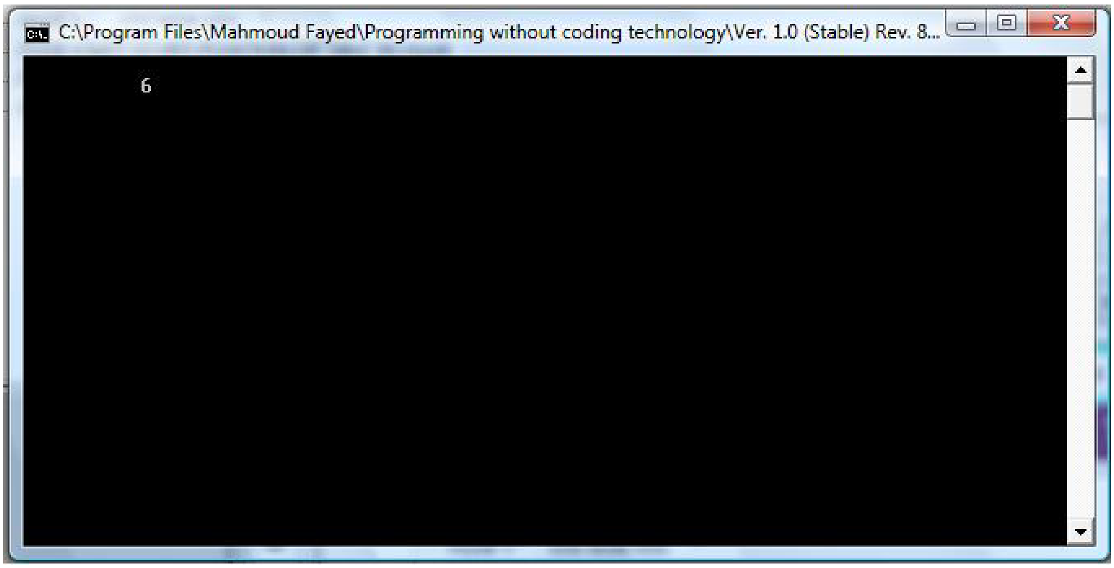
String / Variable: mystr
Sub String / Variable: "o0o"
Output (Variable): mystr

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      mystr = "    o0o wow o0o    "
      mystr = GET START POSITION OF "o0o" IN mystr
      Print Text (NEW LINE) mystr
      WAIT (SECONDS)
```

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

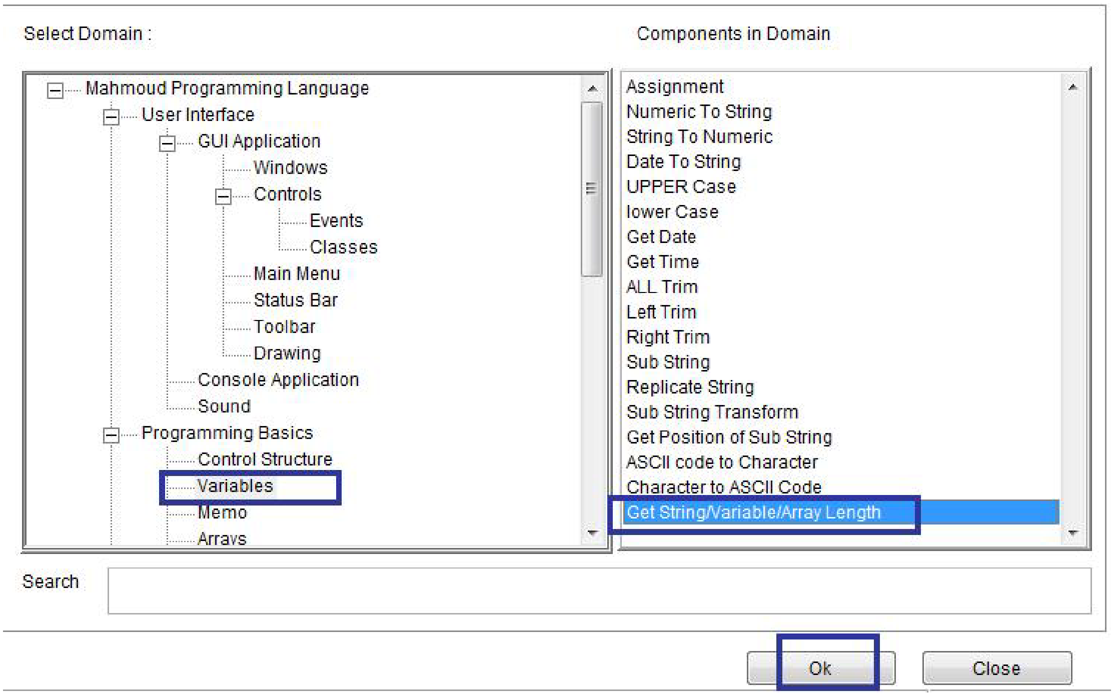
```
        6
```

The final application

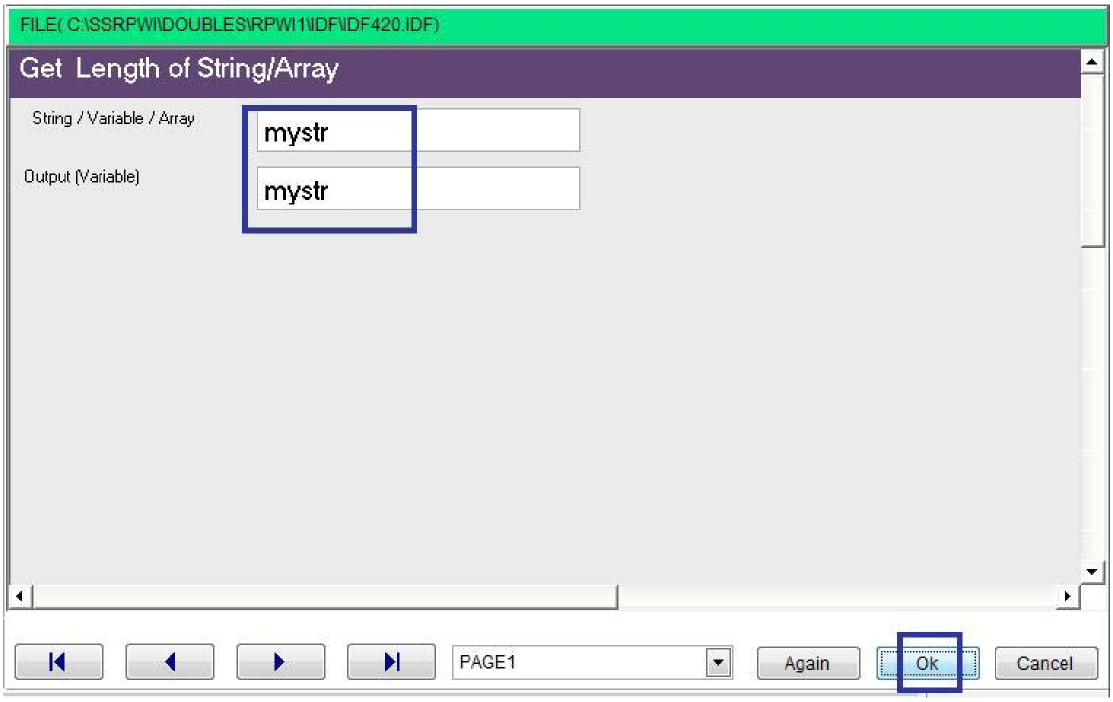
Get String/Variable/Array Length

Return the length of a character string or the number of elements in an array

Example – Screen Shots:



Domain (Variables) Component (Get String/Variables/Length)



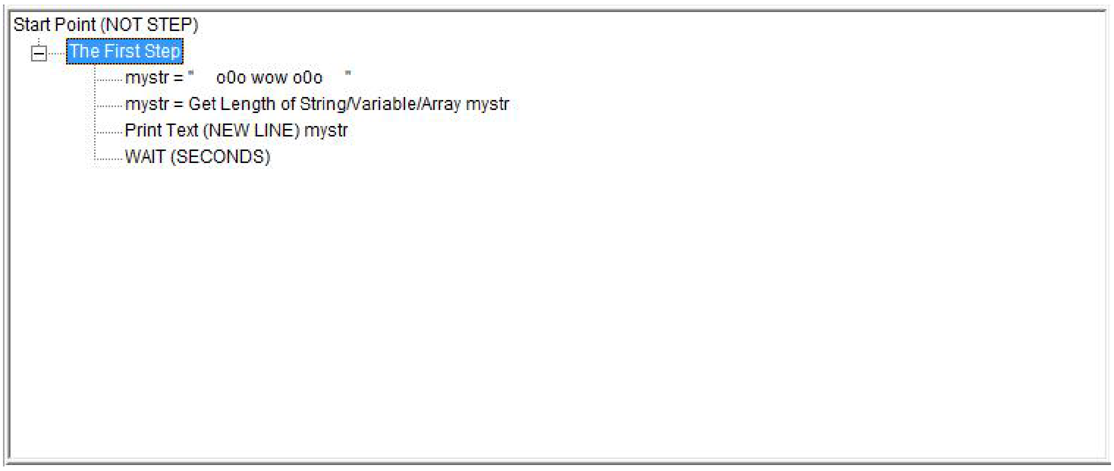
FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF420.IDF)

Get Length of String/Array

String / Variable / Array: mystr

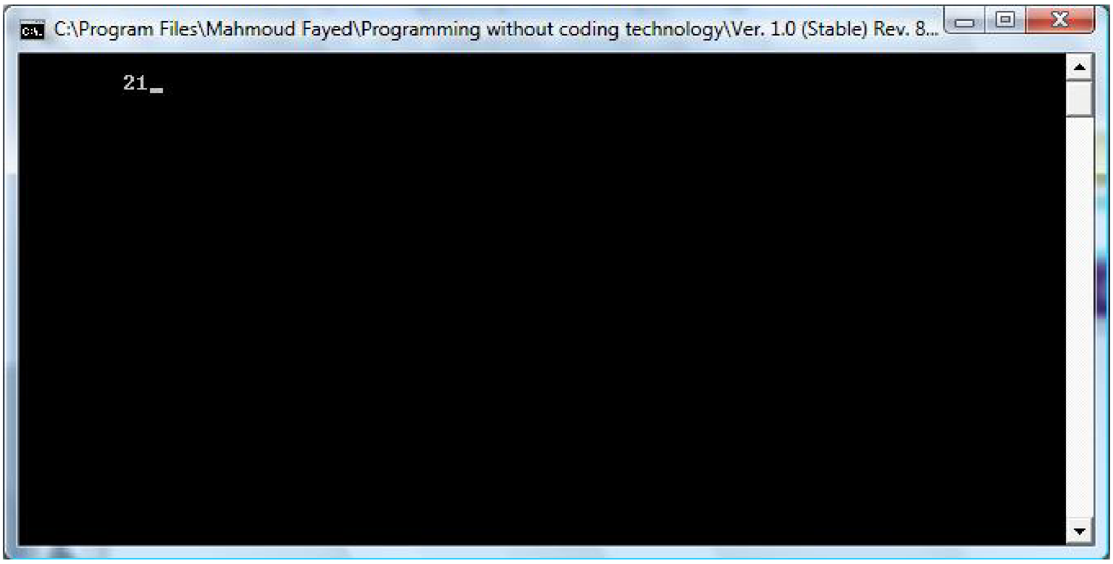
Output (Variable): mystr

Interaction Pages



```
Start Point (NOT STEP)
 The First Step
   mystr = "    o0o wow o0o    "
   mystr = Get Length of String/Variable/Array mystr
   Print Text (NEW LINE) mystr
   WAIT (SECONDS)
```

The final steps tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

```
        21_
```

The final application

Numerical variables and arithmetic operations

Domain (Arithmetic)

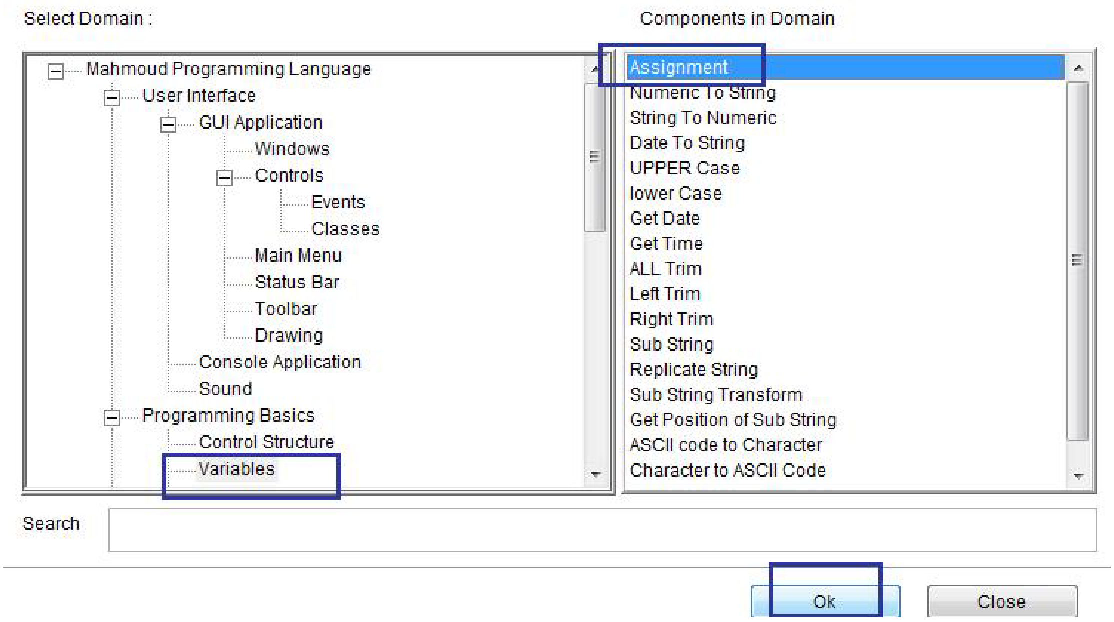
Components:-

- Sum two numbers
- Subtract
- Multiplication
- Division
- Square root
- Numeric value to an integer
- Round
- Modulus (%)
- Generate random number

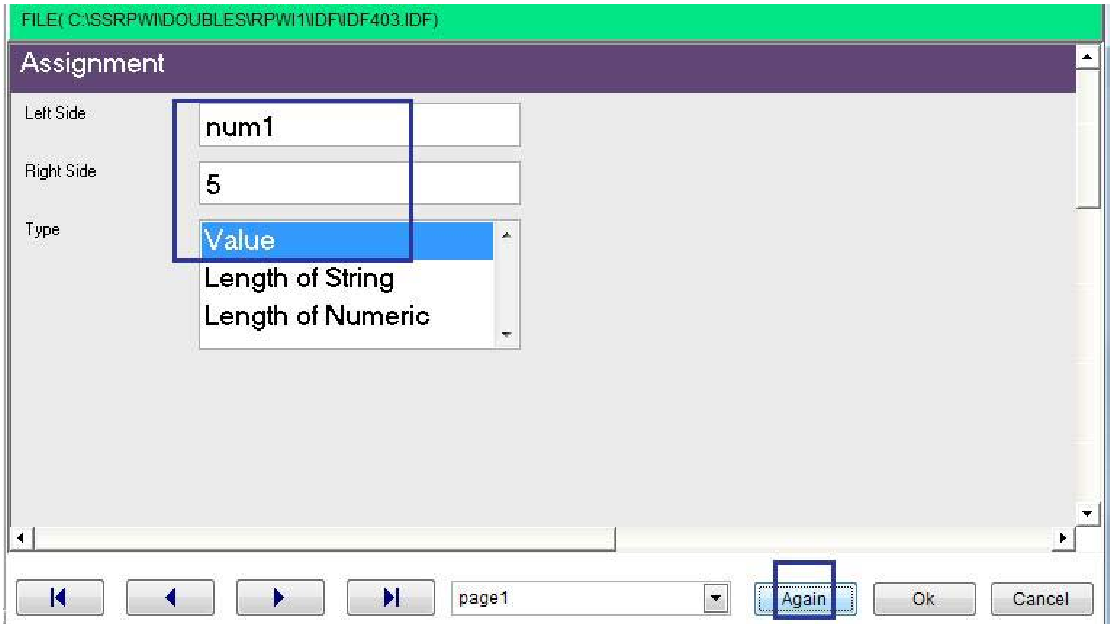
Sum two numbers:-

- Domain (Arithmetic)
- Component (Sum two numbers)

Example – Screen Shots:-



Domain (Variables) – Component (Assignment)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

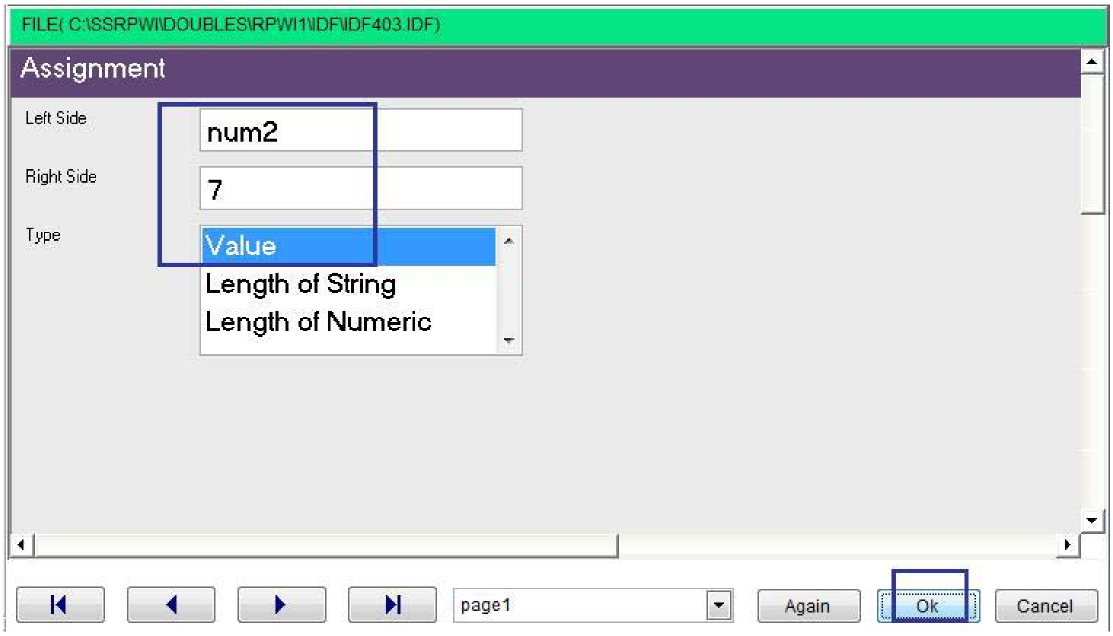
Assignment

Left Side: num1

Right Side: 5

Type: Value

Interaction Page



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

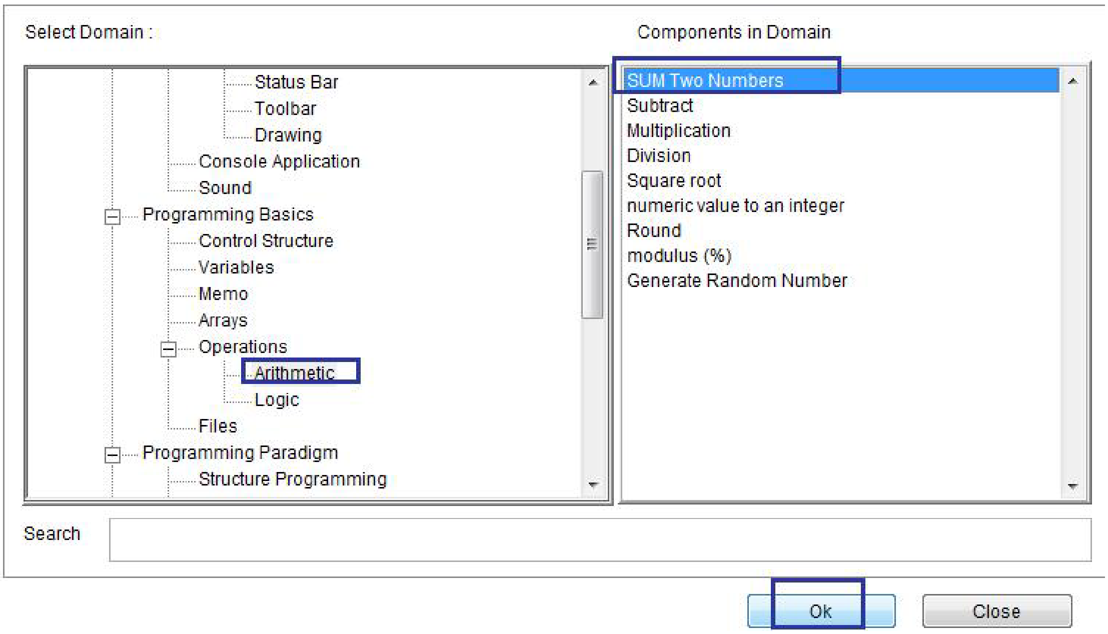
Assignment

Left Side: num2

Right Side: 7

Type: Value

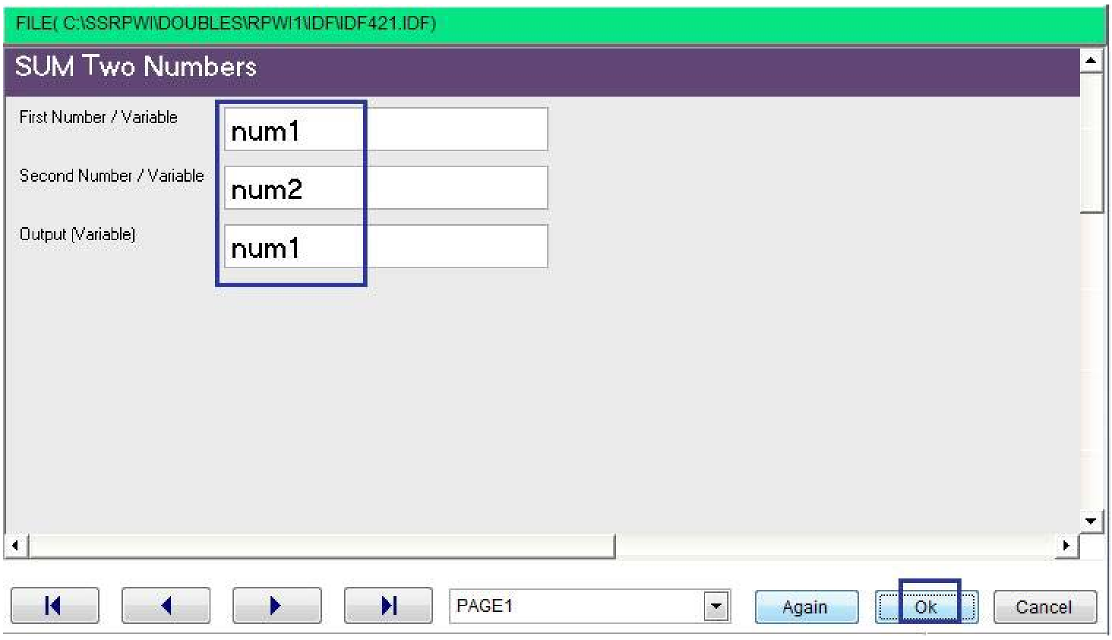
Interaction Page



Select Domain : Programming Basics > Operations > Arithmetic

Components in Domain: SUM Two Numbers

Component (Arithmetic) – Component (Sum two numbers)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF421.IDF)

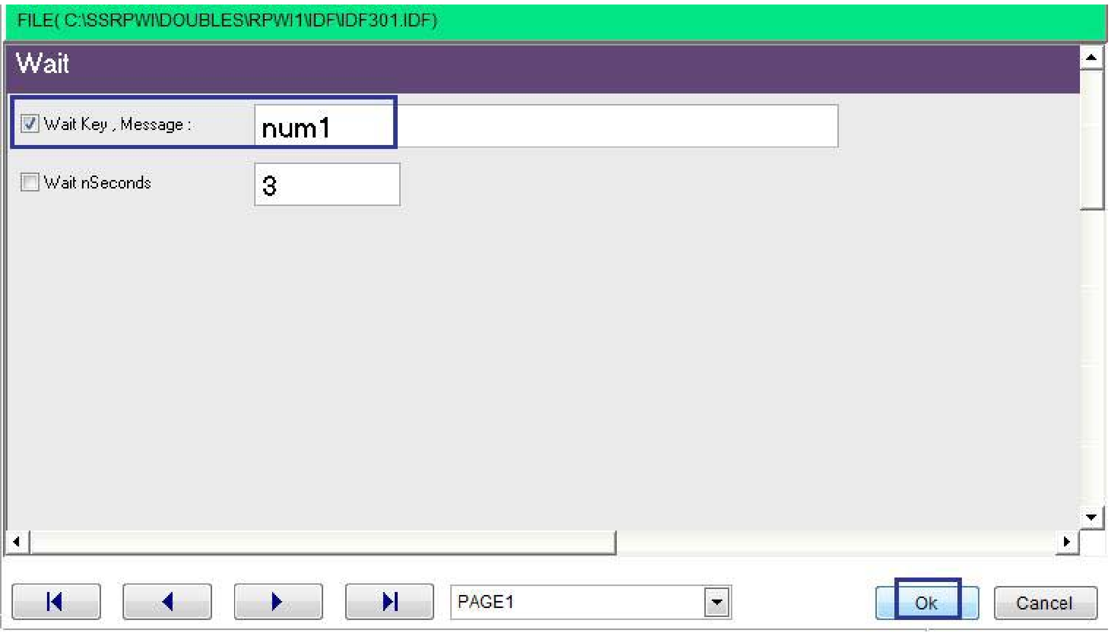
SUM Two Numbers

First Number / Variable: num1

Second Number / Variable: num2

Output (Variable): num1

Interaction Page



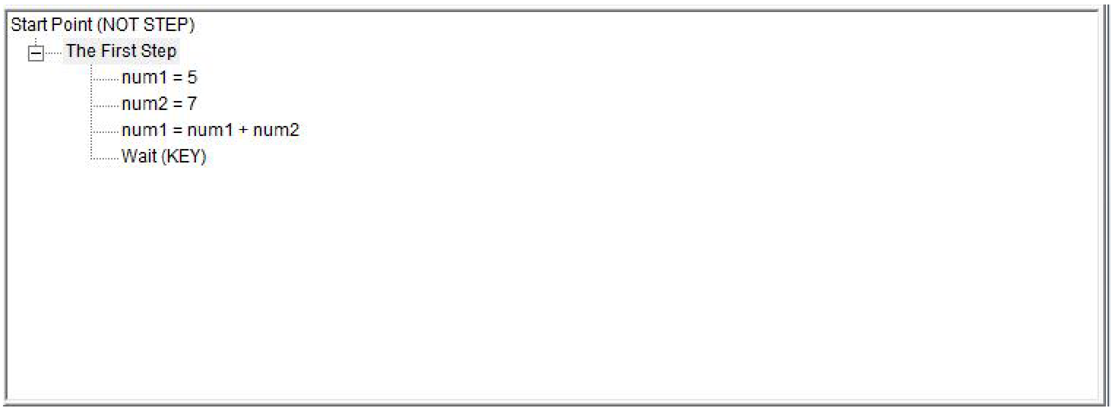
FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF301.IDF)

Wait

☑ Wait Key , Message : num1

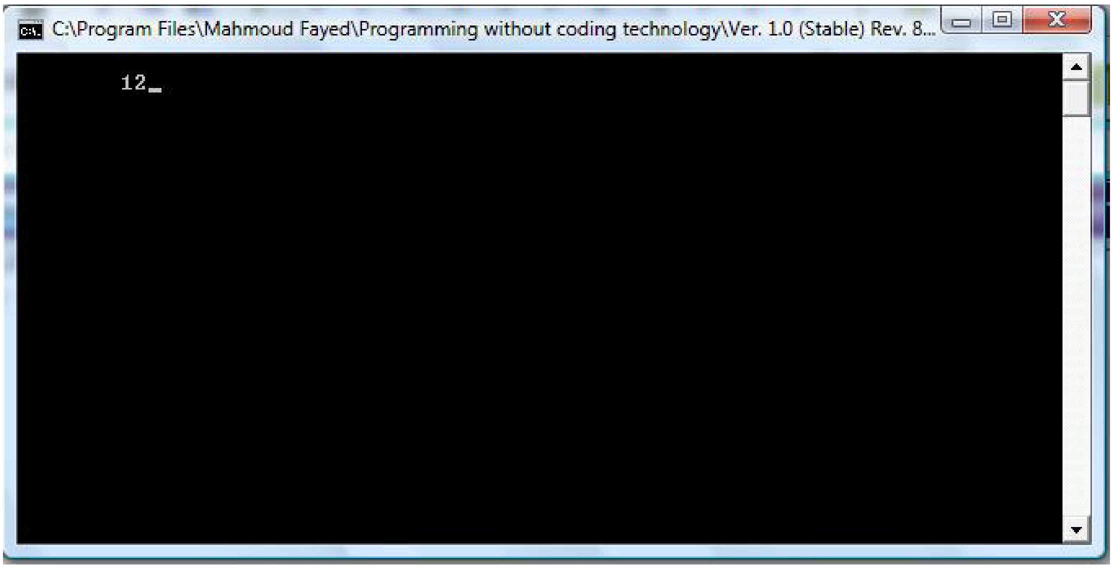
☐ Wait nSeconds 3

Interaction Page



```
Start Point (NOT STEP)
  The First Step
        num1 = 5
        num2 = 7
        num1 = num1 + num2
        Wait (KEY)
```

Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

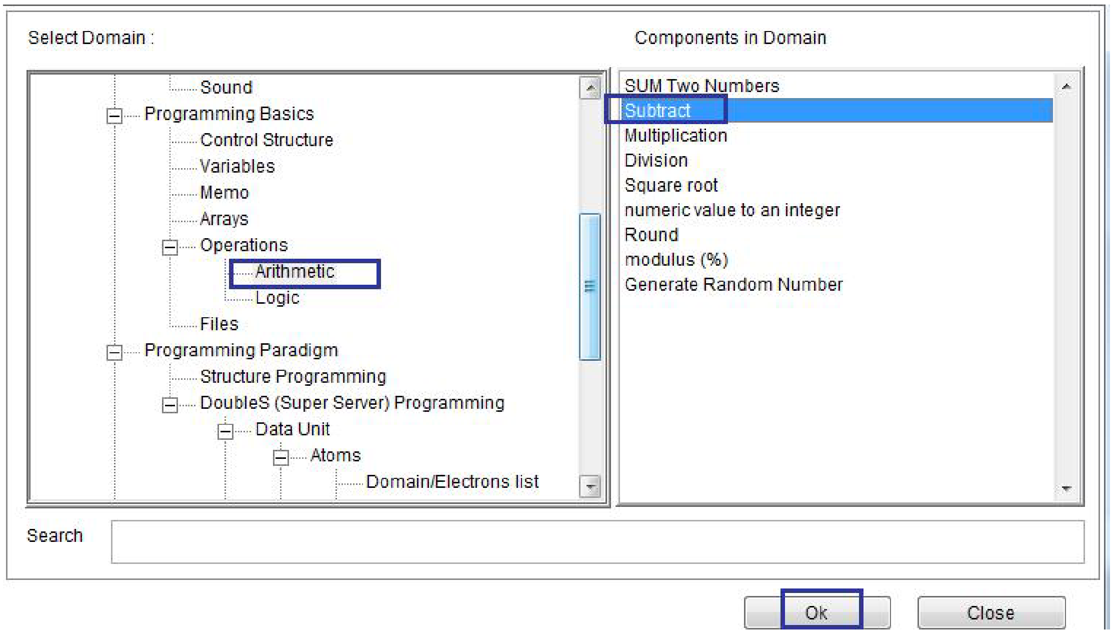
```
12_
```

The final application

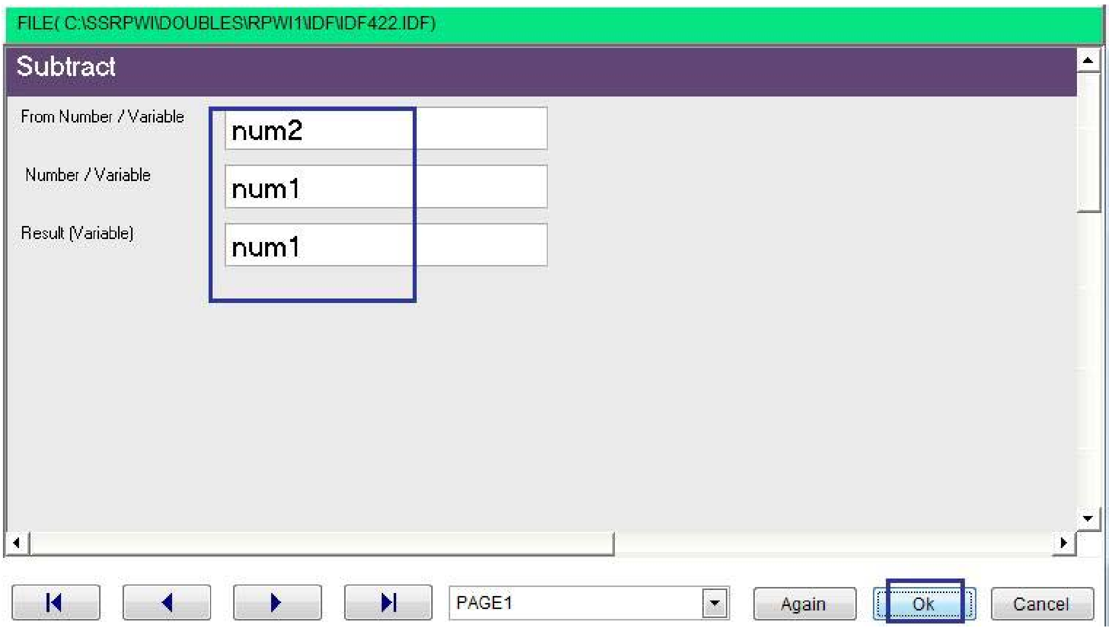
Subtract

- Domain (Arithmetic)
- Component (Subtract)

Screen shots

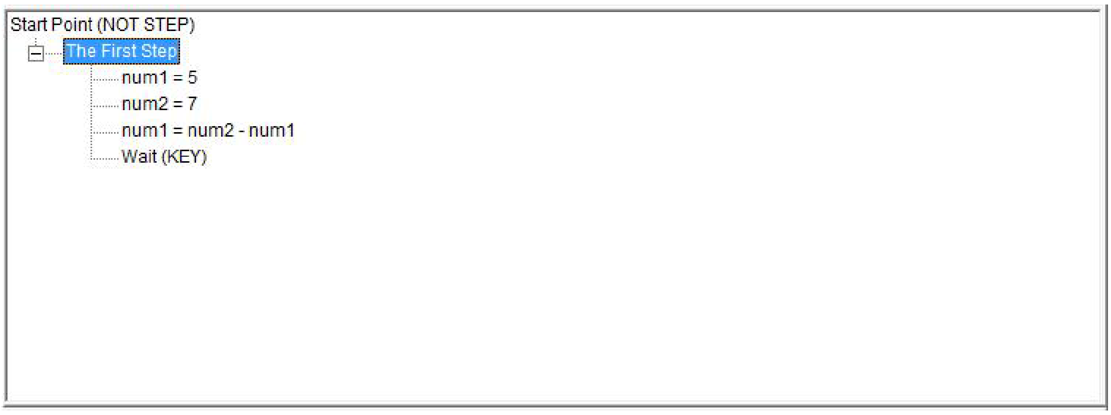


Domain (Arithmetic) – Component (Subtract)



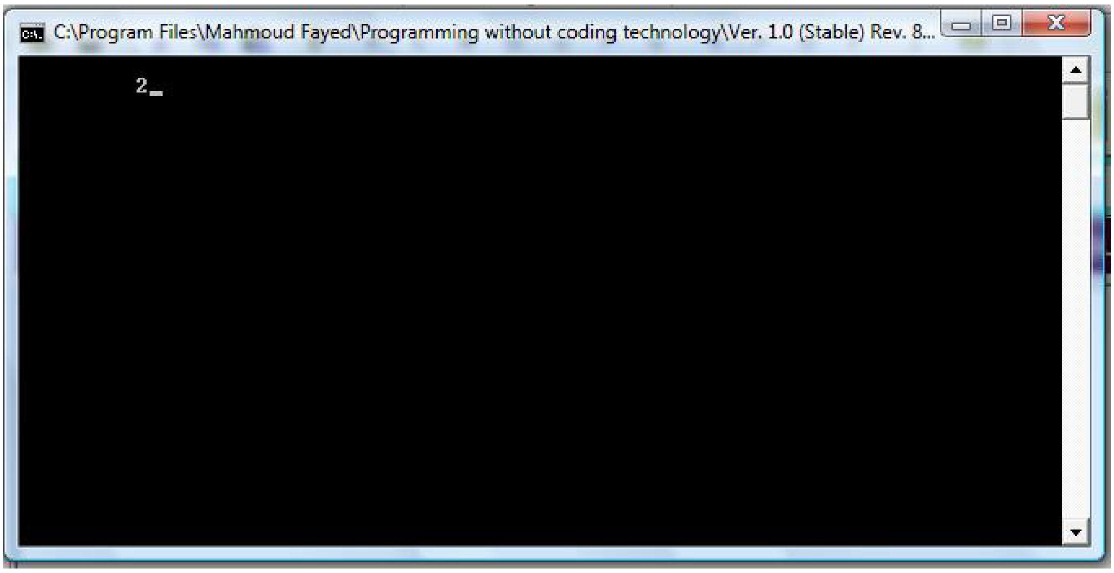
From Number / Variable: num2
Number / Variable: num1
Result (Variable): num1

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      num1 = 5
      num2 = 7
      num1 = num2 - num1
      Wait (KEY)
```

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

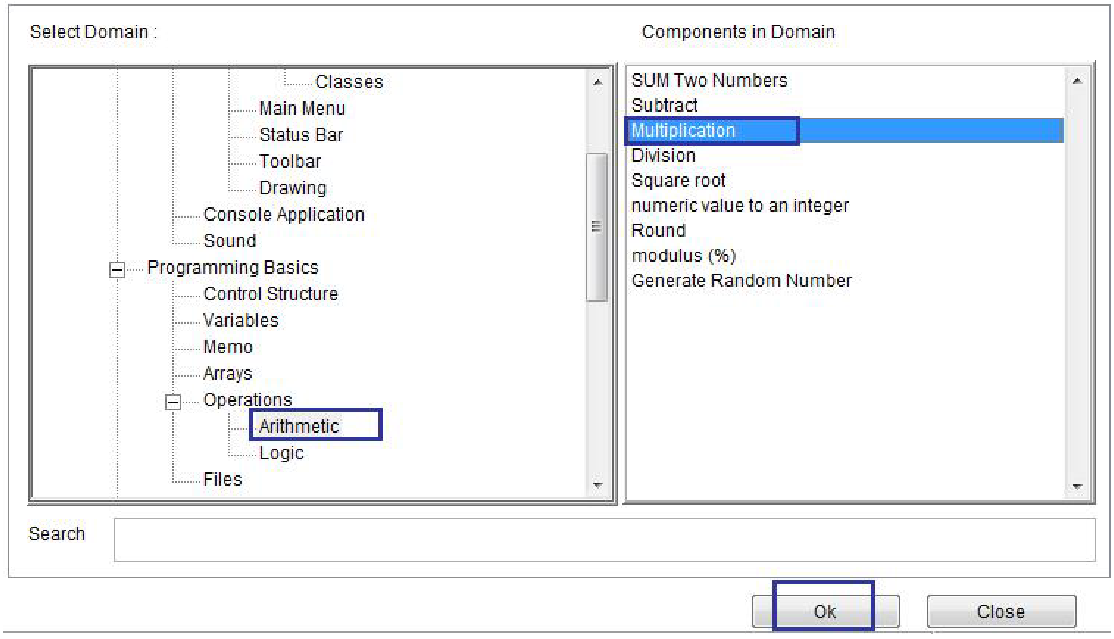
```
2_
```

The Final Program

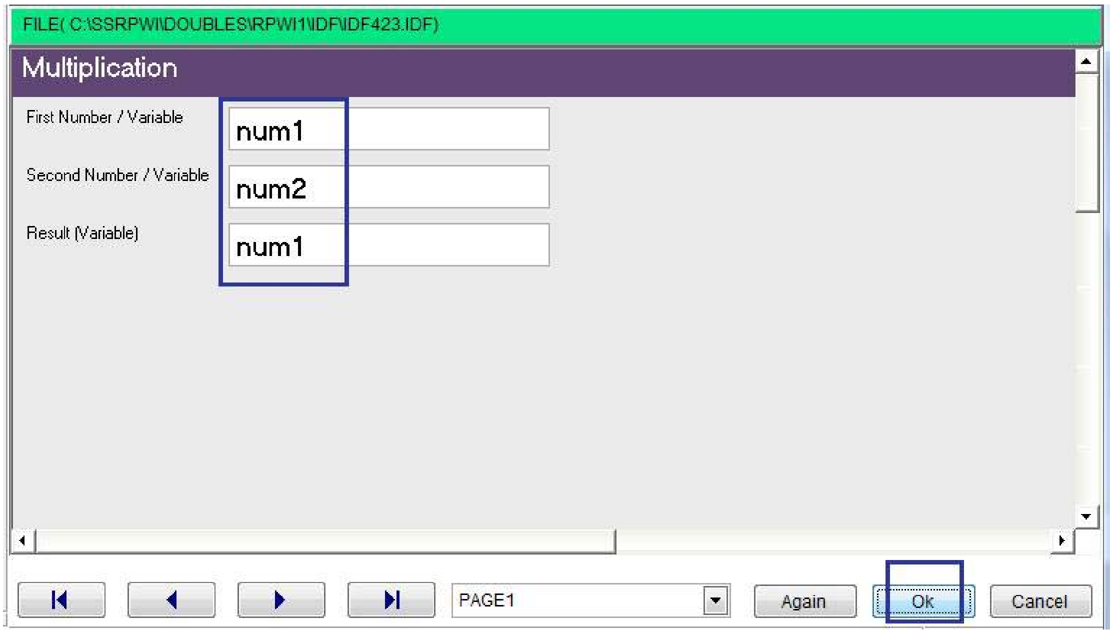
Multiplication

- Domain (Arithmetic)
- Component (Multiplication)

Screen shots



Domain (Arithmetic) – Component (Multiplication)

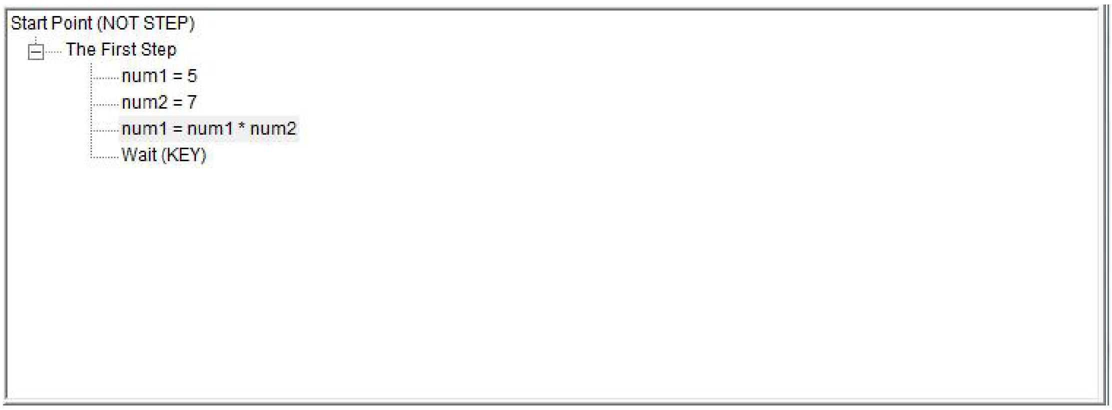


First Number / Variable: num1

Second Number / Variable: num2

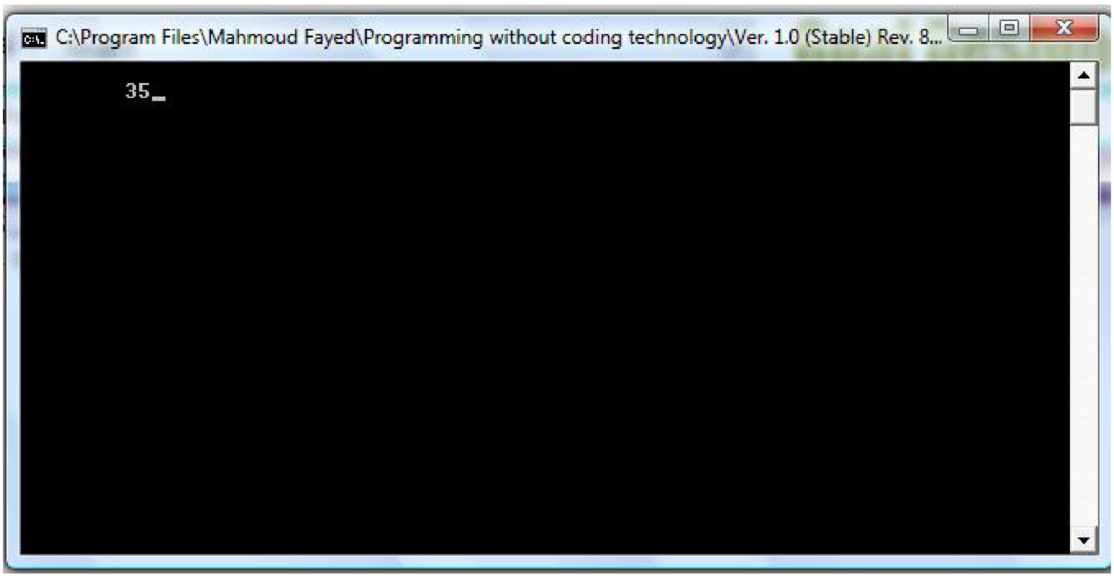
Result (Variable): num1

Interaction Page



```
Start Point (NOT STEP)
   The First Step
         num1 = 5
         num2 = 7
         num1 = num1 * num2
         Wait (KEY)
```

The Final Steps Tree



C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

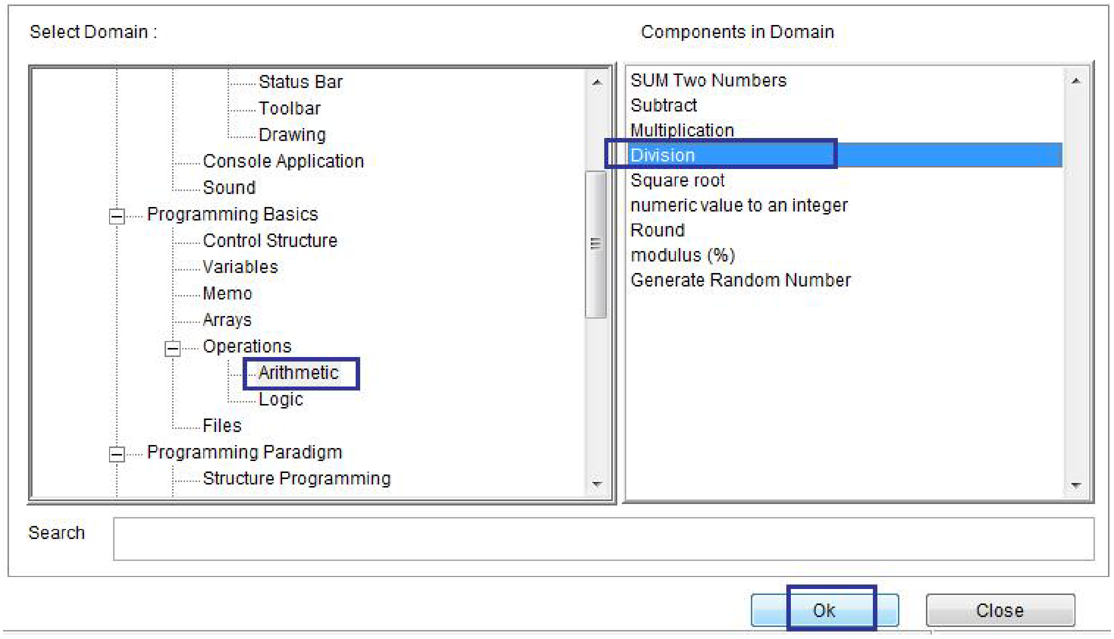
```
35_
```

The Final Application

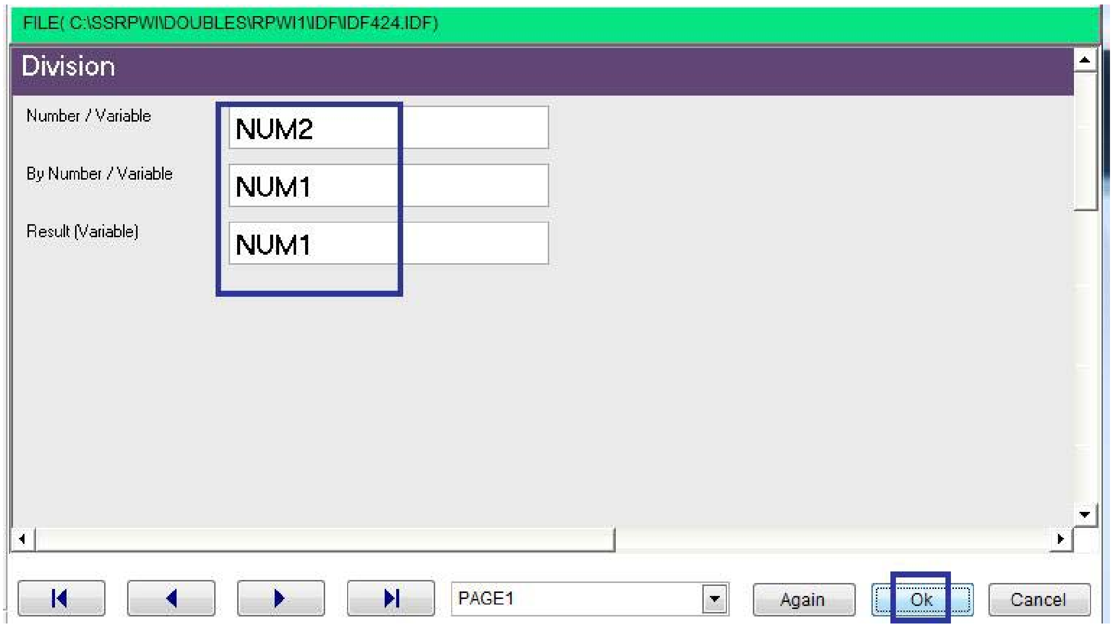
Division

- Domain (Arithmetic)
- Component (Division)

Example - Screen shots:-



Domain (Arithmetic) – Component (Division)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF424.IDF)

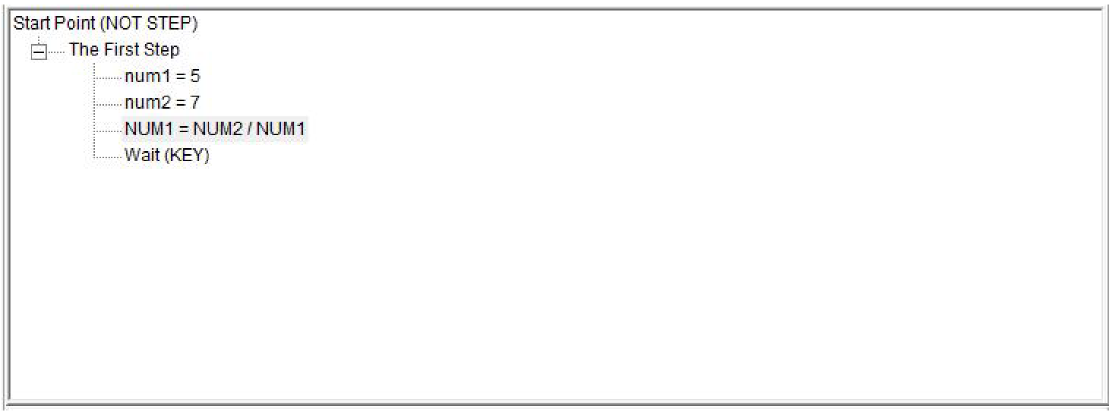
Division

Number / Variable: NUM2

By Number / Variable: NUM1

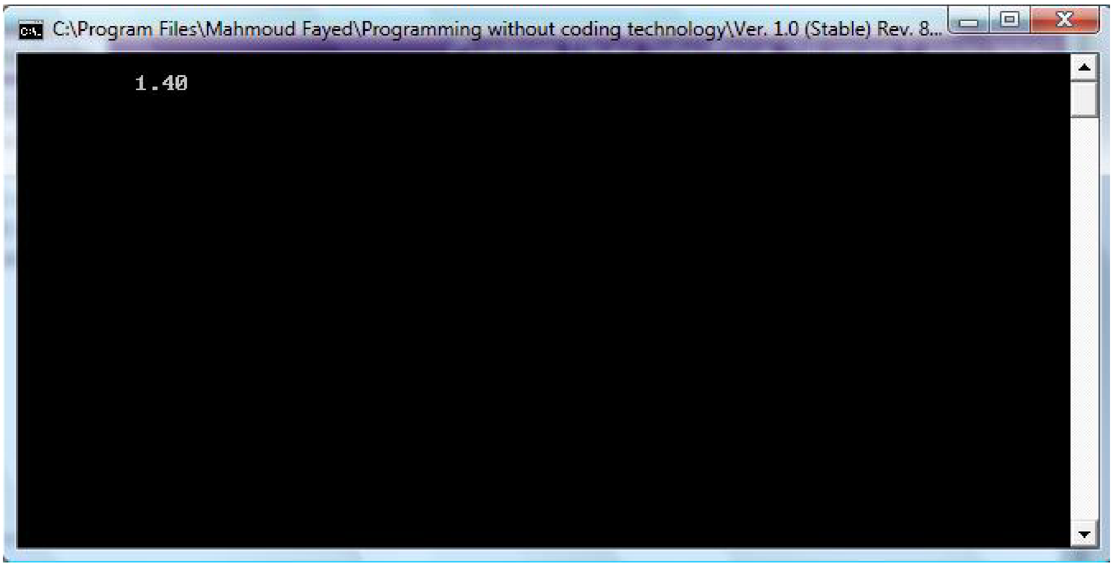
Result (Variable): NUM1

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      num1 = 5
      num2 = 7
      NUM1 = NUM2 / NUM1
      Wait (KEY)
```

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

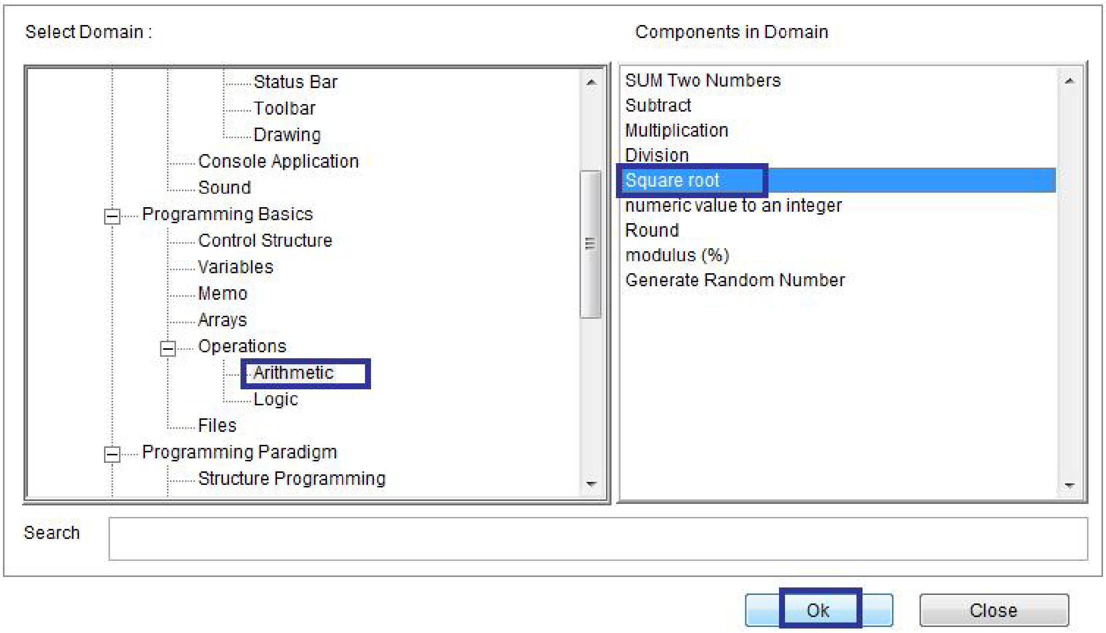
```
1.40
```

The final application

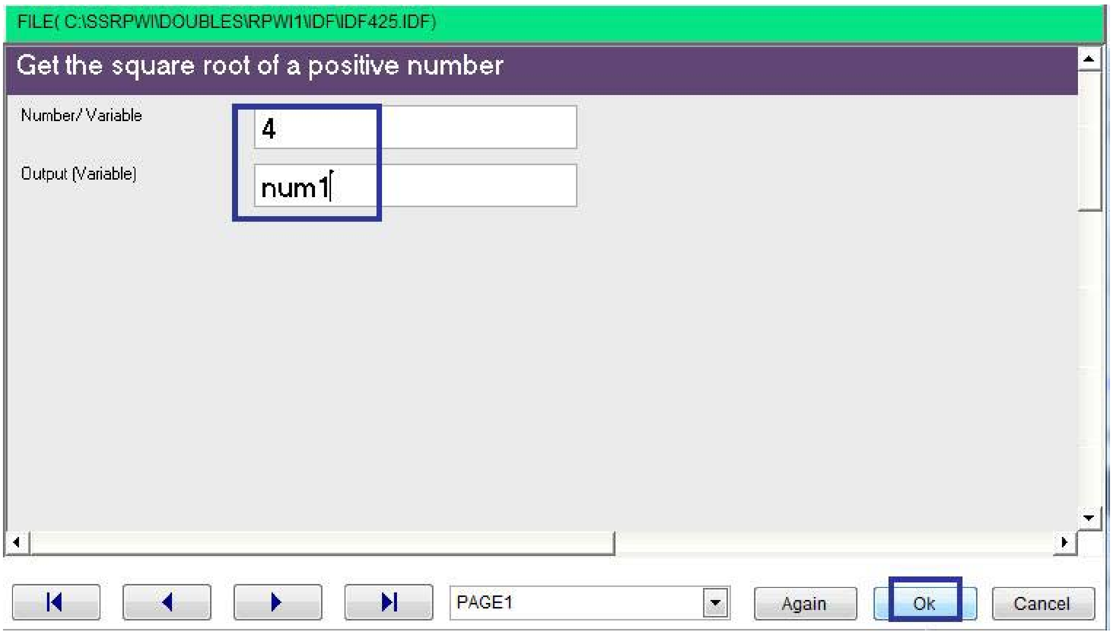
Square root

- Domain (Arithmetic)
- Component (Square root)

Example - Screen shots:-



Domain (Arithmetic) Component (Square root)



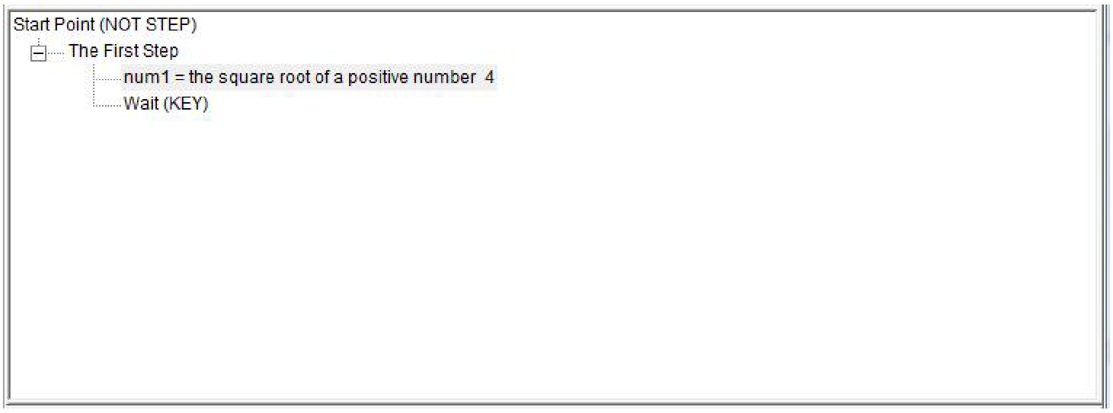
FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF425.IDF)

Get the square root of a positive number

Number/ Variable: 4

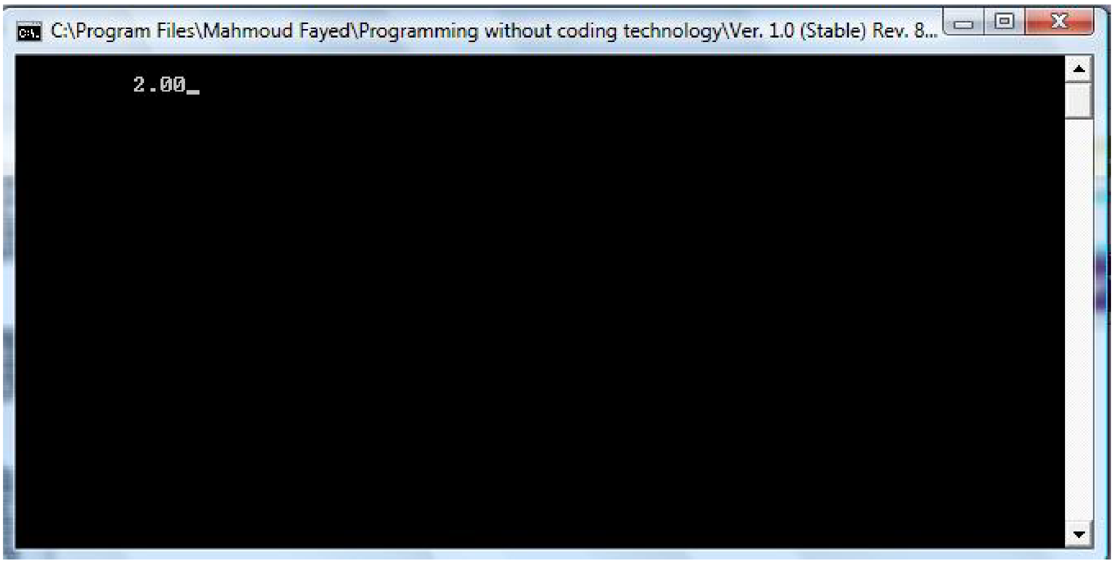
Output (Variable): num1

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      num1 = the square root of a positive number  4
      Wait (KEY)
```

Final Steps Tree



C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

```
        2.00_
```

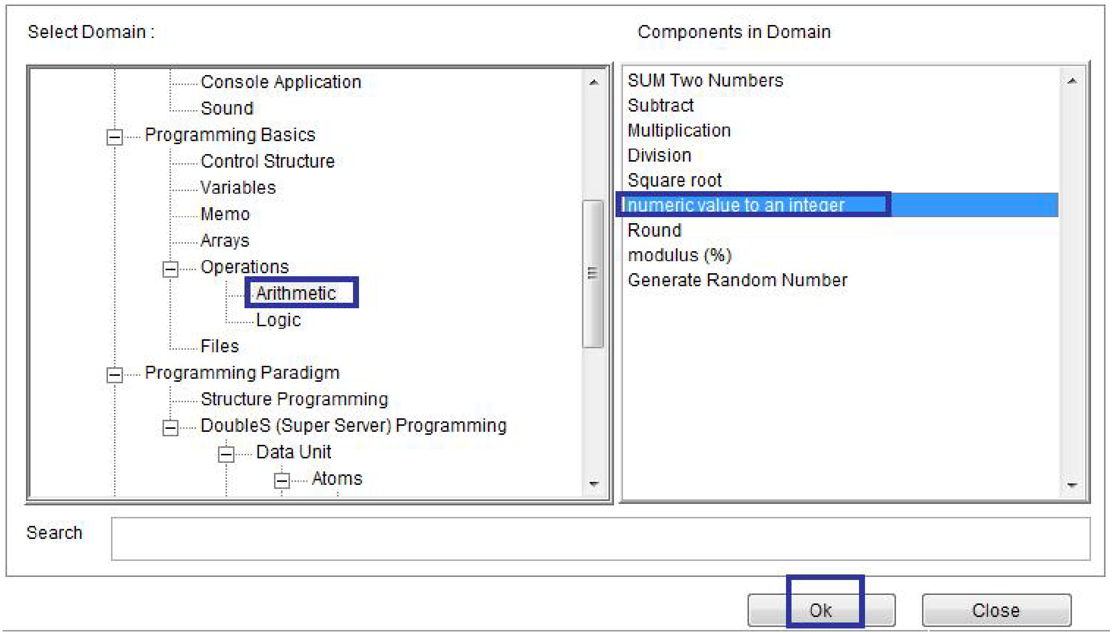
Final Application

`

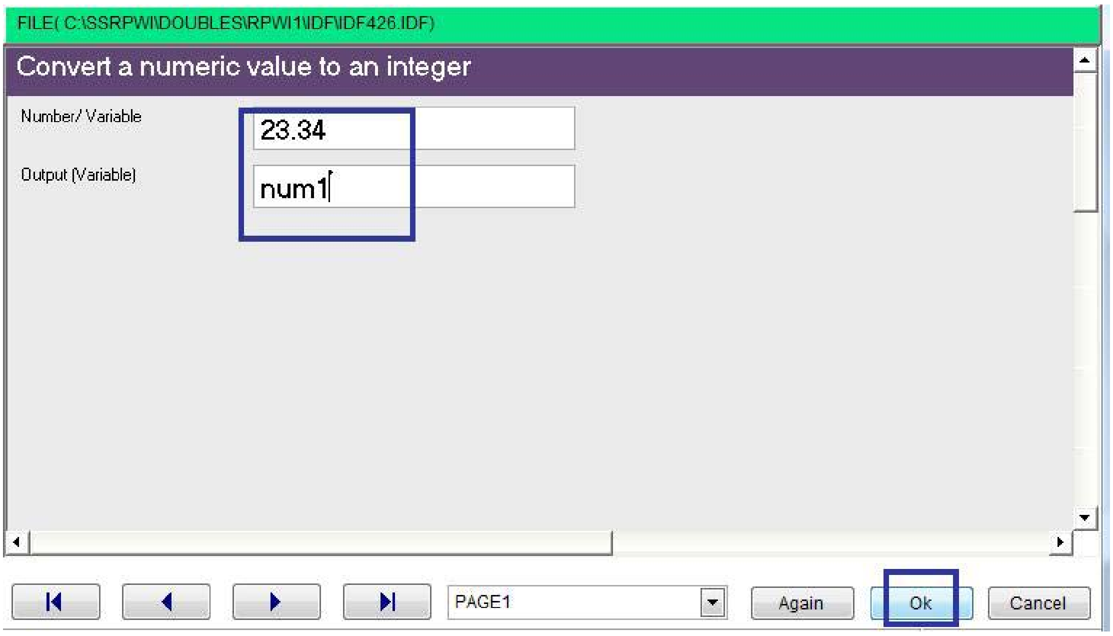
Numeric value to an integer

- Domain (Arithmetic)
- Component (Numeric value to an integer)

Example - Screen shots:-



Domain (Arithmetic) – Component (Numeric value to an integer)



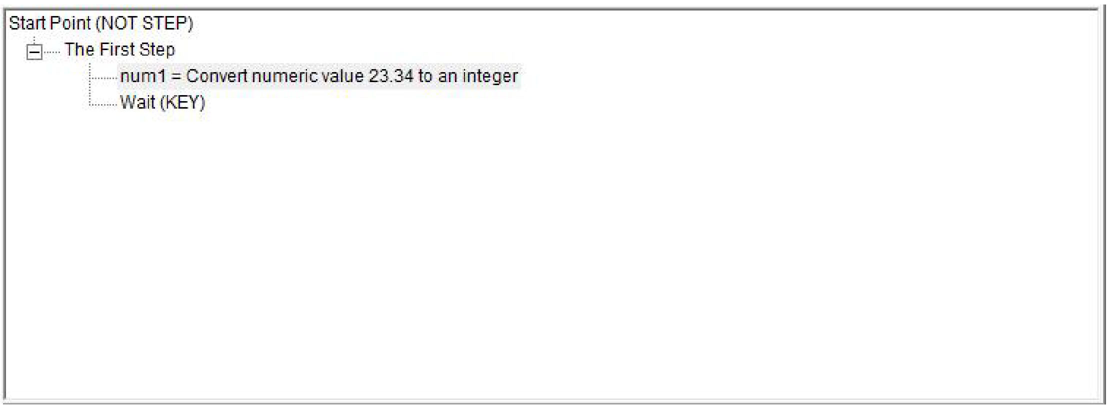
FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF426.IDF)

Convert a numeric value to an integer

Number/ Variable: 23.34

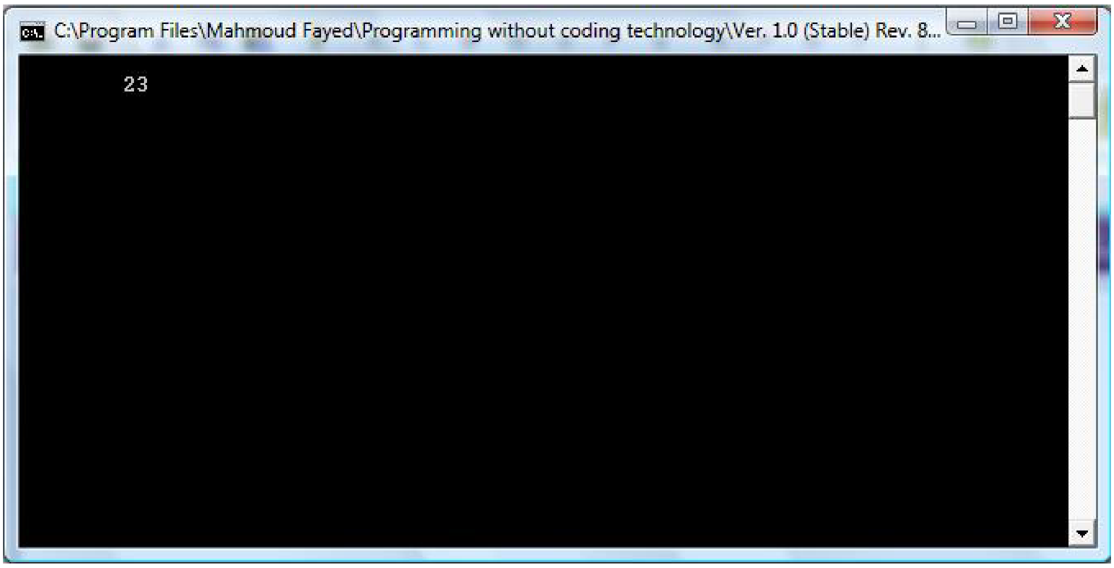
Output (Variable): num1

Interaction Page



Start Point (NOT STEP)
The First Step
num1 = Convert numeric value 23.34 to an integer
Wait (KEY)

Steps Tree



C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

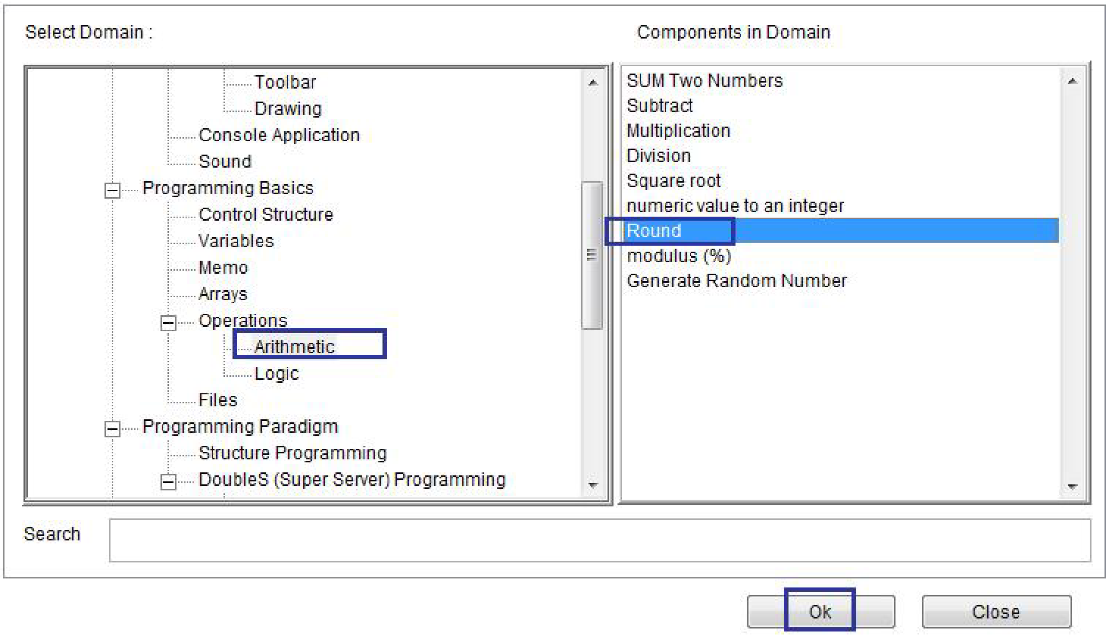
```
        23
```

The Final Application

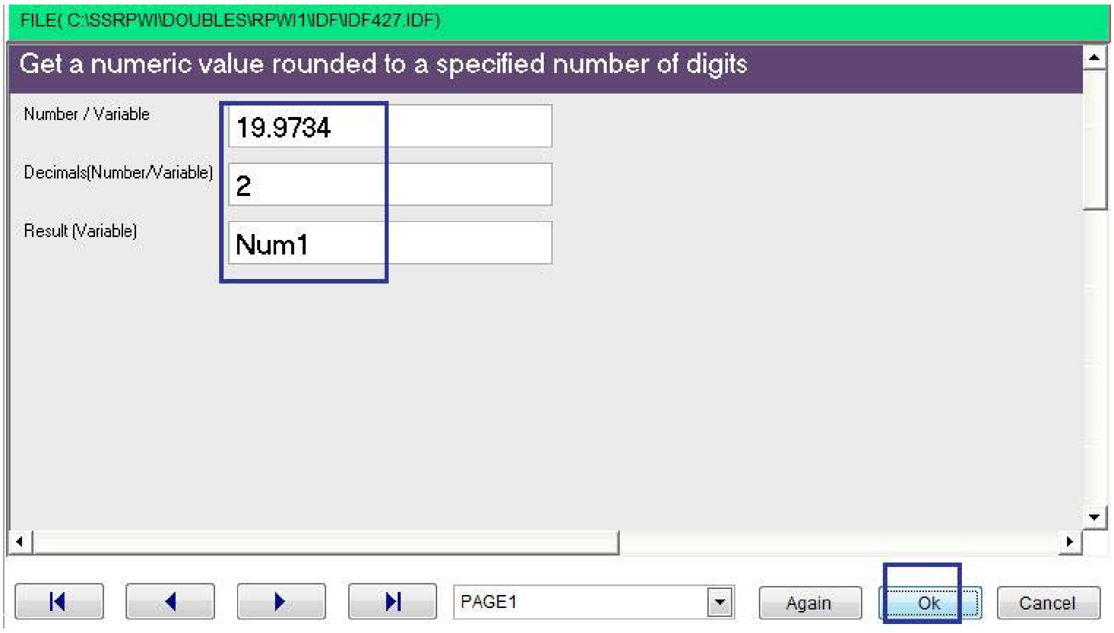
Round

- Domain (Arithmetic)
- Component (Round)

Example - Screen shots:-



Domain (Arithmetic) – Component (Round)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF427.IDF)

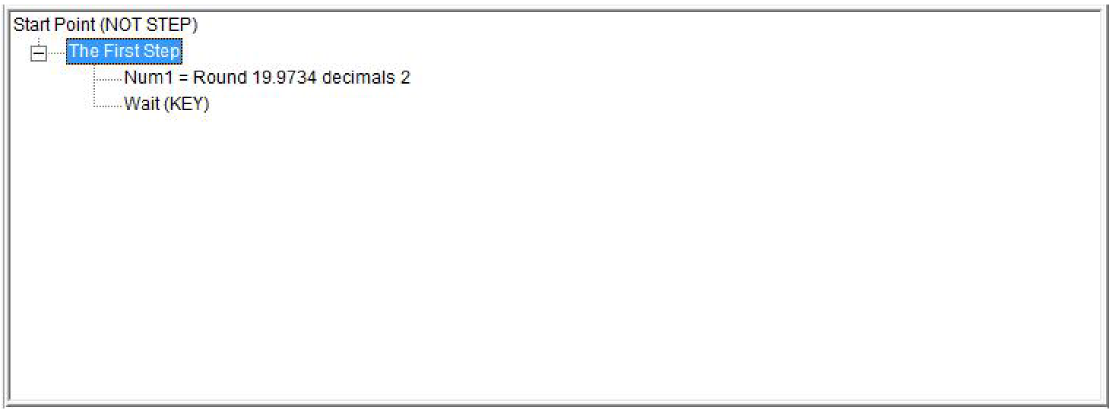
Get a numeric value rounded to a specified number of digits

Number / Variable: 19.9734

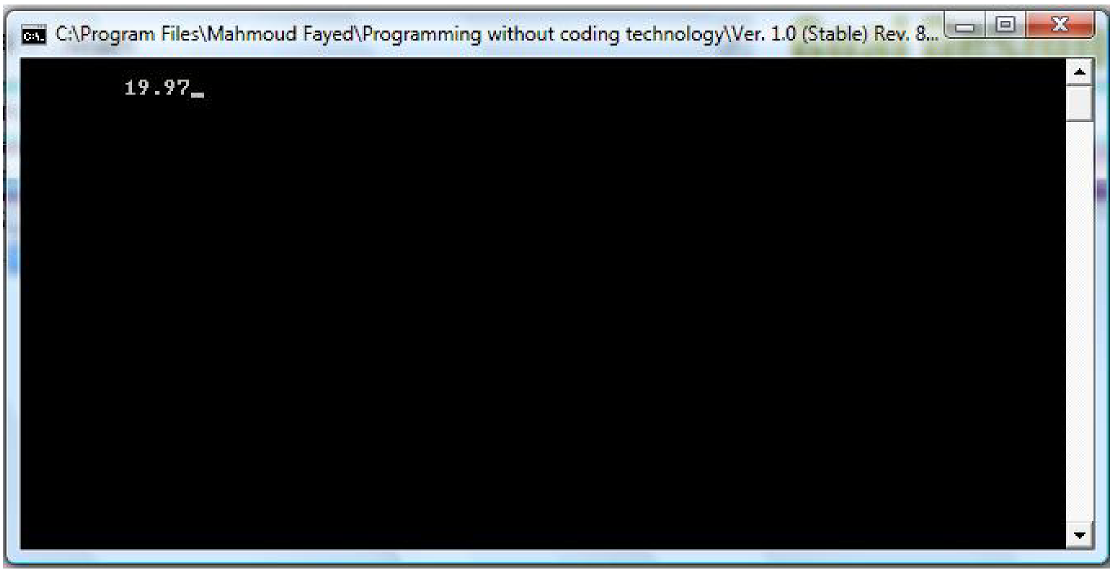
Decimals(Number/Variable): 2

Result (Variable): Num1

Interaction Page


Start Point (NOT STEP)
- The First Step
  - Num1 = Round 19.9734 decimals 2
  - Wait (KEY)

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

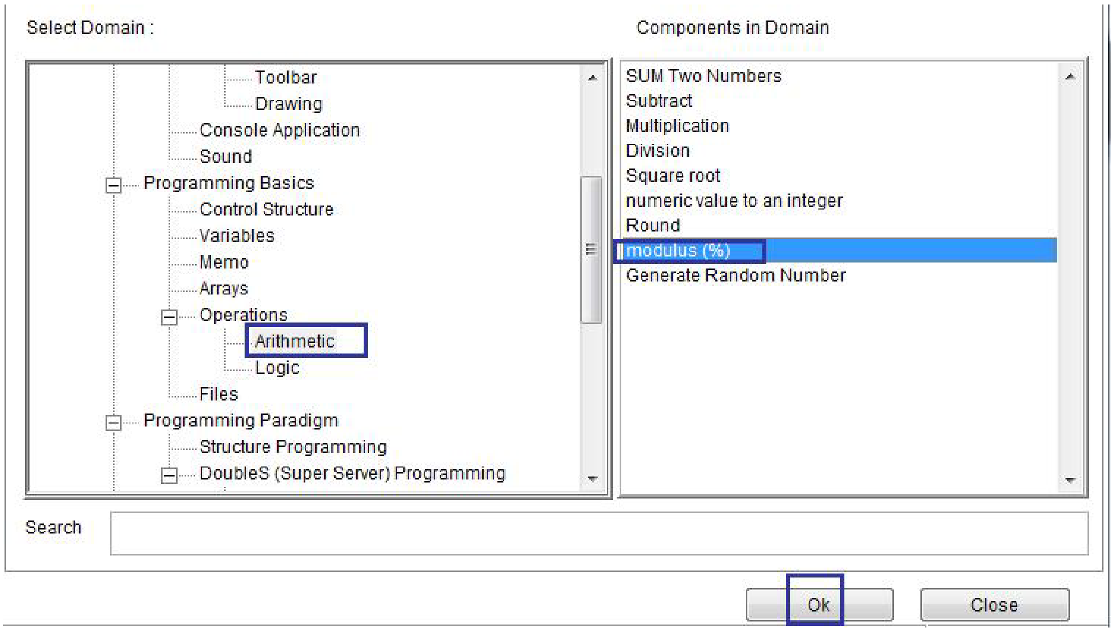
```
19.97_
```

Final application

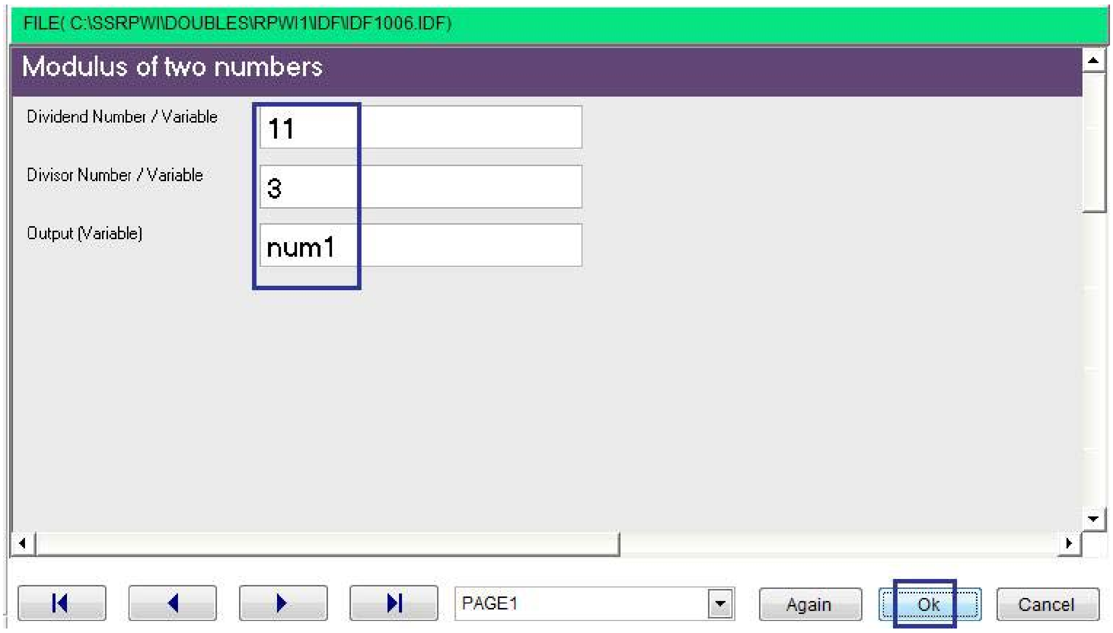
Modulus (%)

- Domain (Arithmetic)
- Component (Modulus)

Example - Screen shots:-



Domain (Arithmetic) – Component (Modulus)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF1006.IDF)

Modulus of two numbers

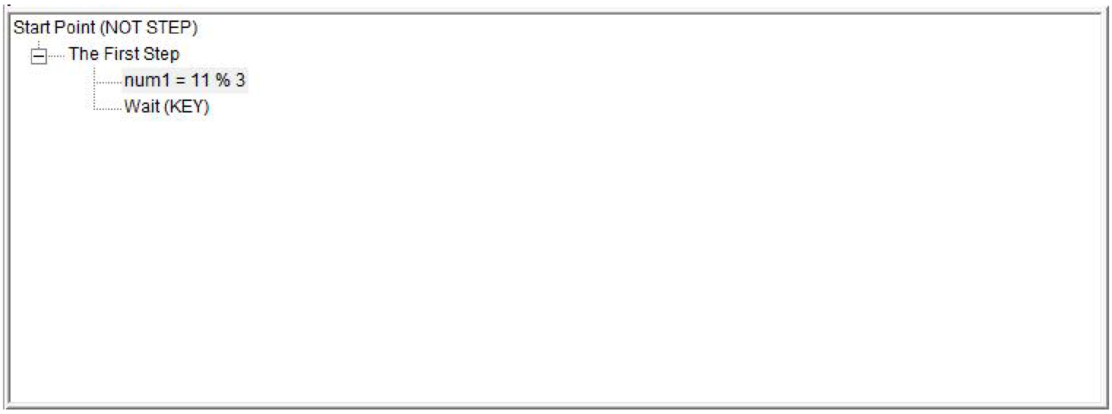
Dividend Number / Variable: 11

Divisor Number / Variable: 3

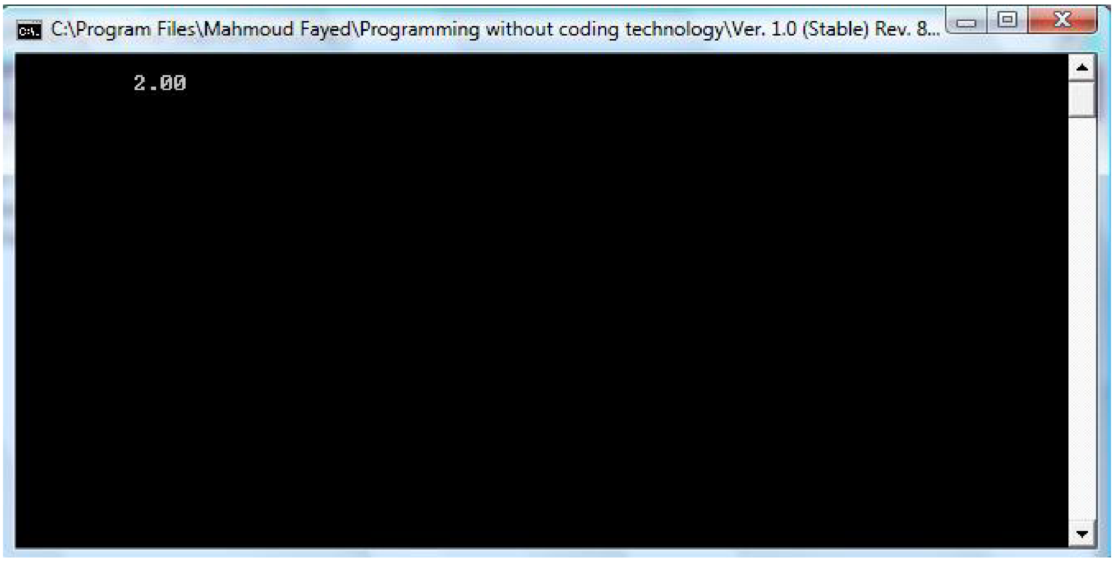
Output (Variable): num1

PAGE1

Interaction Page


```
Start Point (NOT STEP)
  The First Step
      num1 = 11 % 3
      Wait (KEY)
```

Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

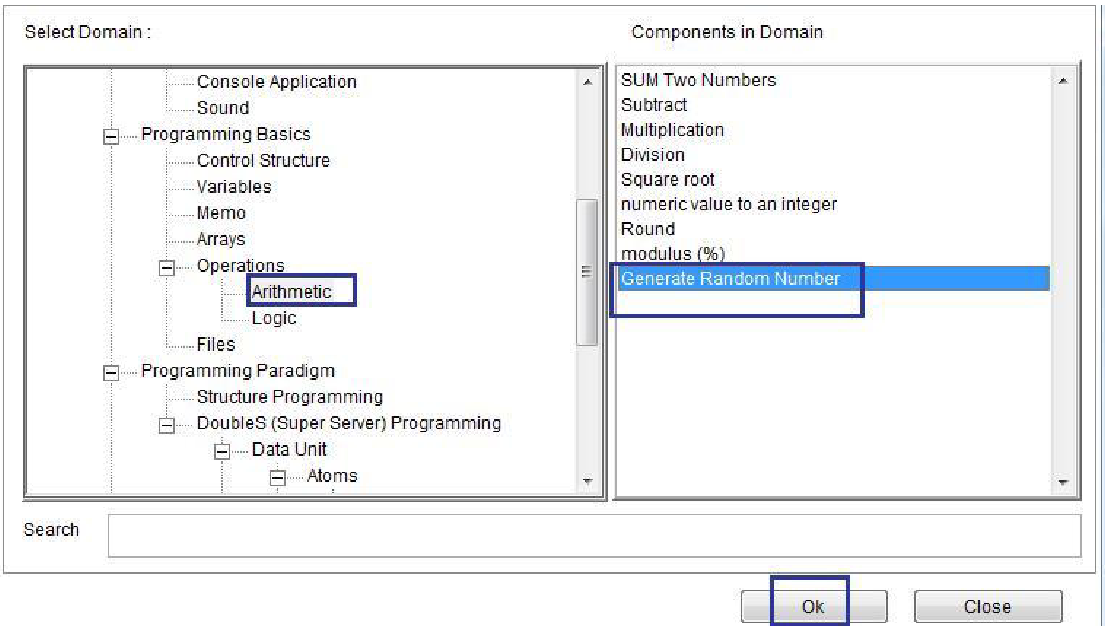
```
        2.00
```

The Final Application

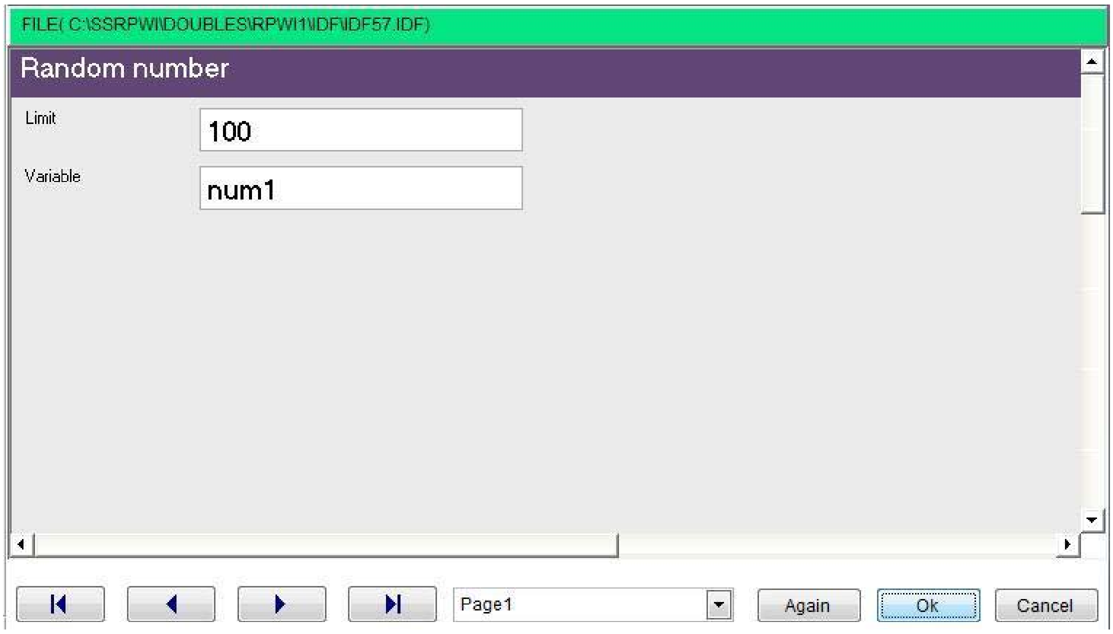
Generate random number

- Domain (Arithmetic)
- Component (Generate random number)

Example - Screen shots:-



Domain (Arithmetic) – Component (Generate Random Number)



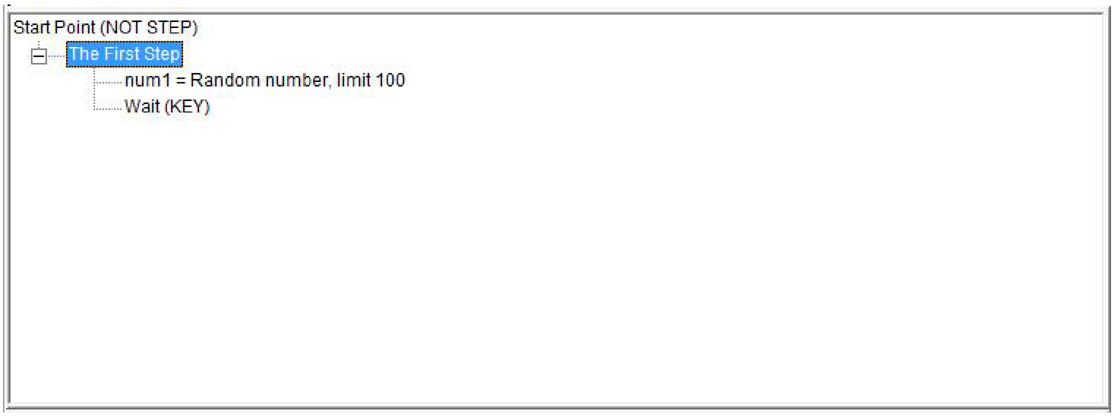
FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF57.IDF)

Random number

Limit: 100

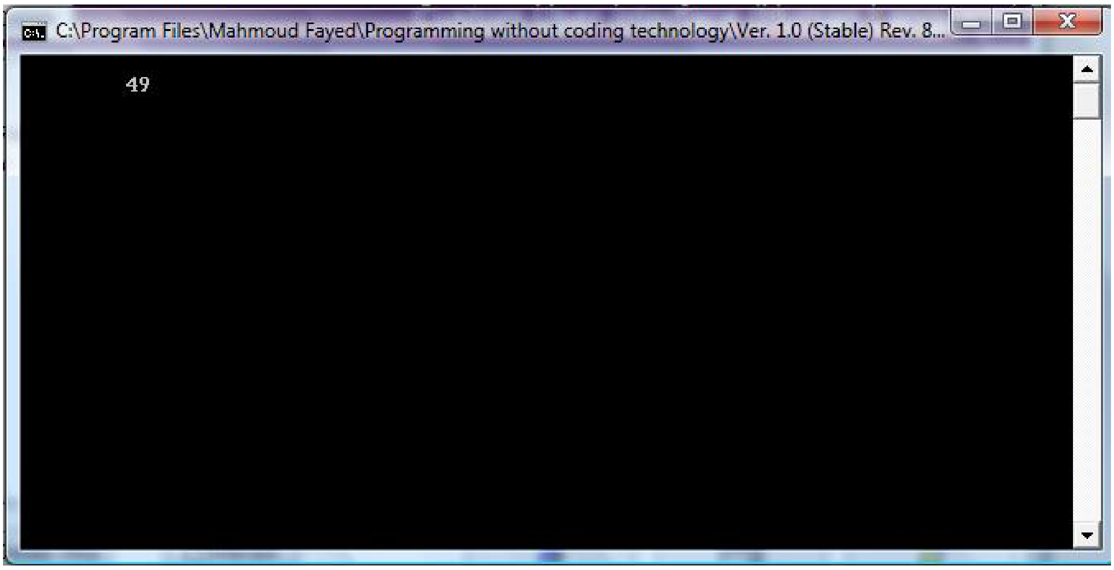
Variable: num1

Interaction Page



```
Start Point (NOT STEP)
   The First Step
        num1 = Random number, limit 100
        Wait (KEY)
```

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

```
49
```

The Final Application

Logical Variables and logical operations

Domain (Logic)

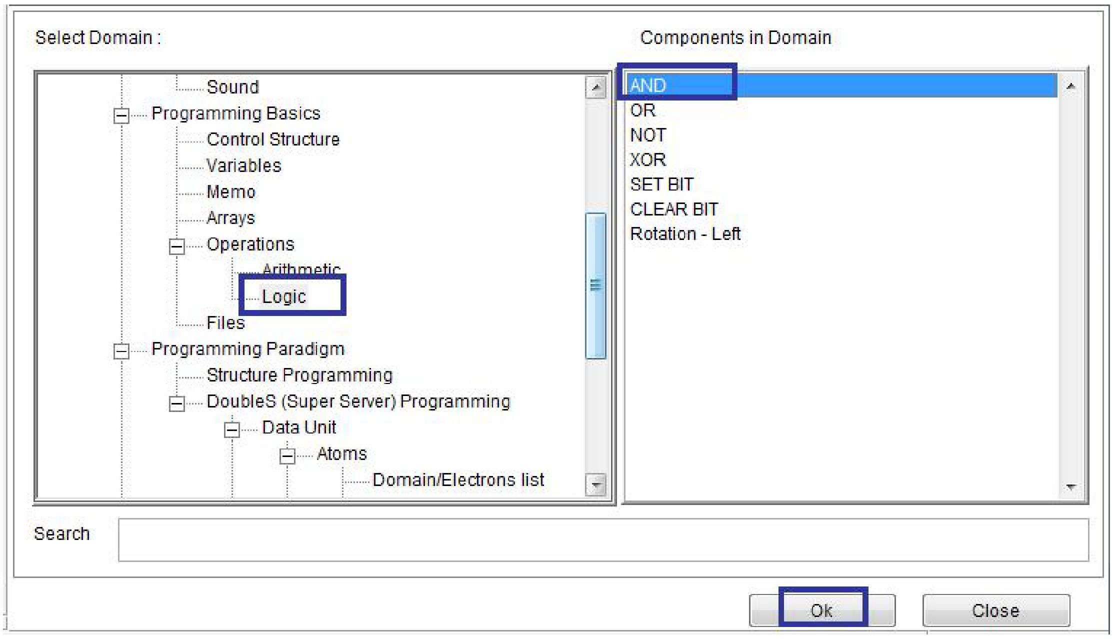
Components:-

- AND
- OR
- NOT
- XOR
- SET BIT
- CLEAR BIT
- ROTATION – LEFT

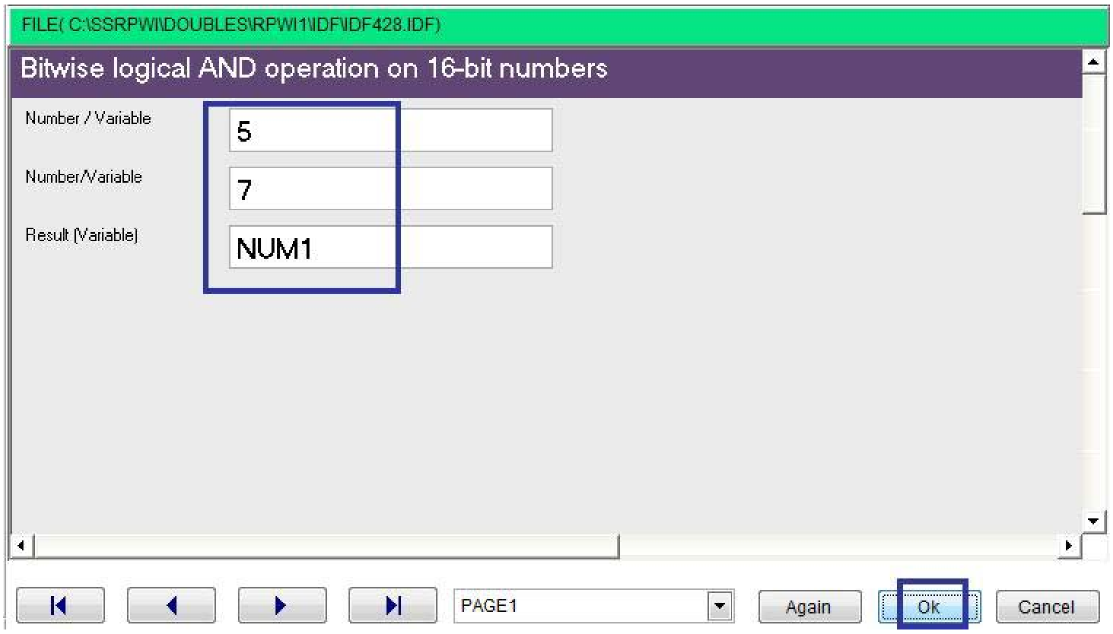
AND

- Domain (Logic)
- Component (AND)

Example - Screen shots:-



Domain (Logic) – Component (AND)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF428.IDF)

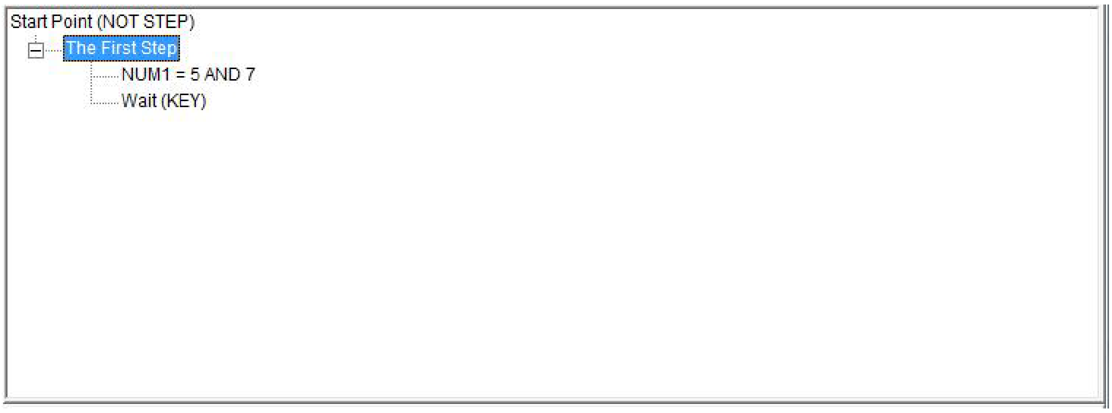
Bitwise logical AND operation on 16-bit numbers

Number / Variable 5

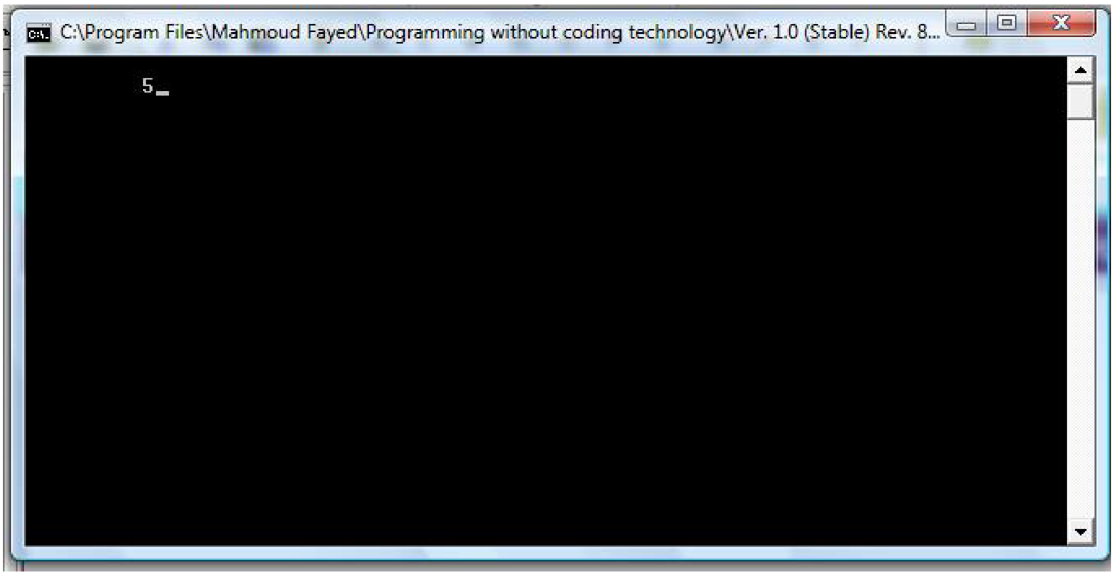
Number/Variable 7

Result (Variable) NUM1

Interaction Page


Start Point (NOT STEP)
The First Step
NUM1 = 5 AND 7
Wait (KEY)

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

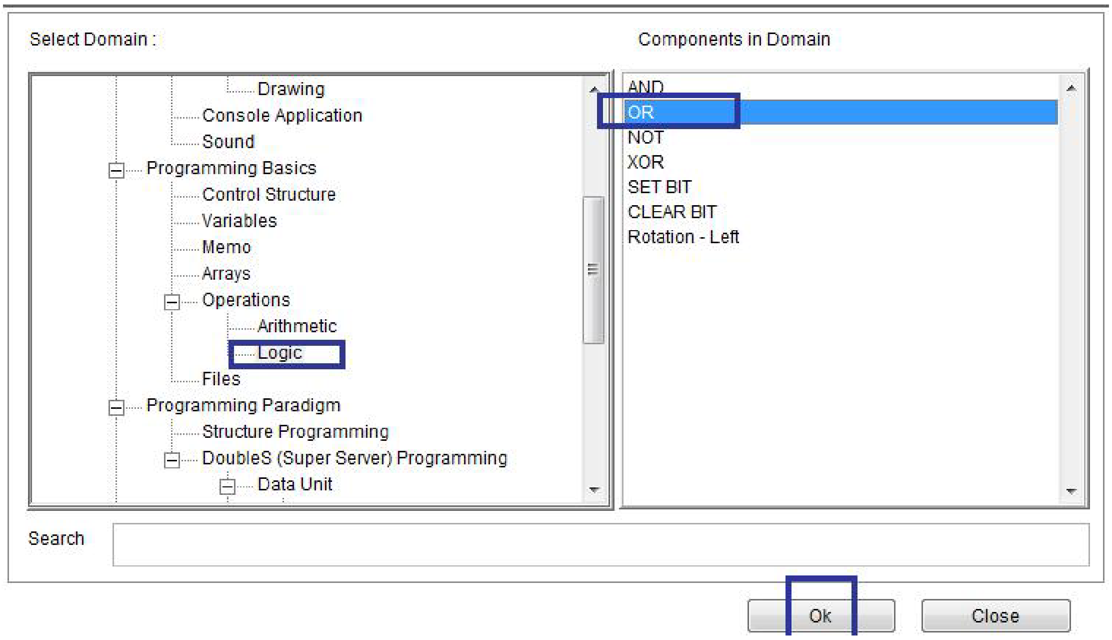
```
5_
```

Final Application

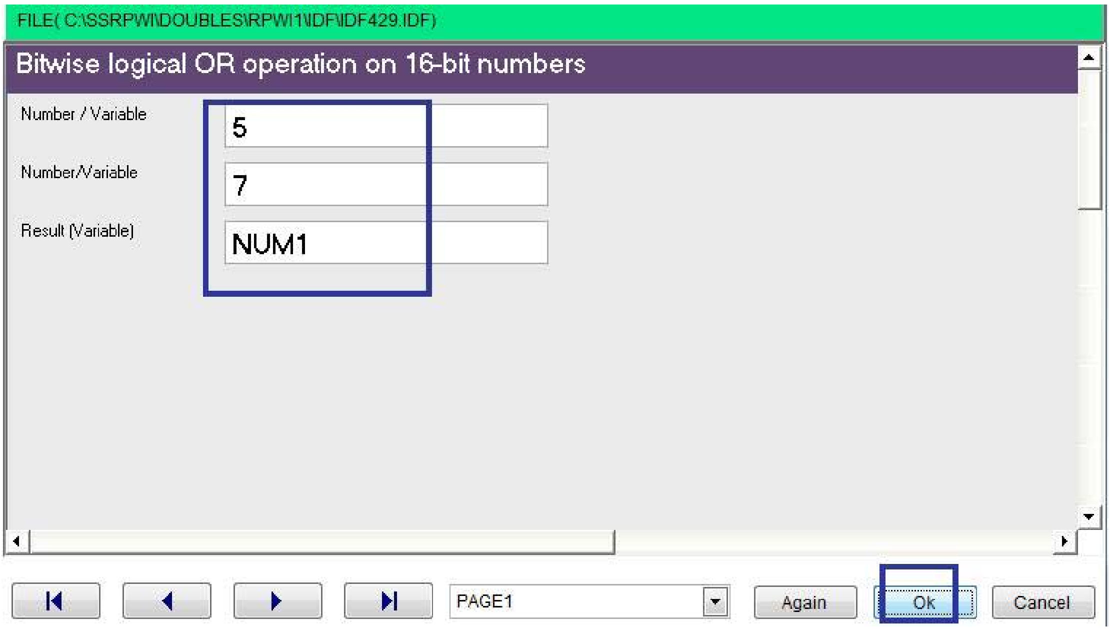
OR

- Domain (Logic)
- Component (OR)

Example - Screen shots:-



Domain (Logic) – Component (OR)



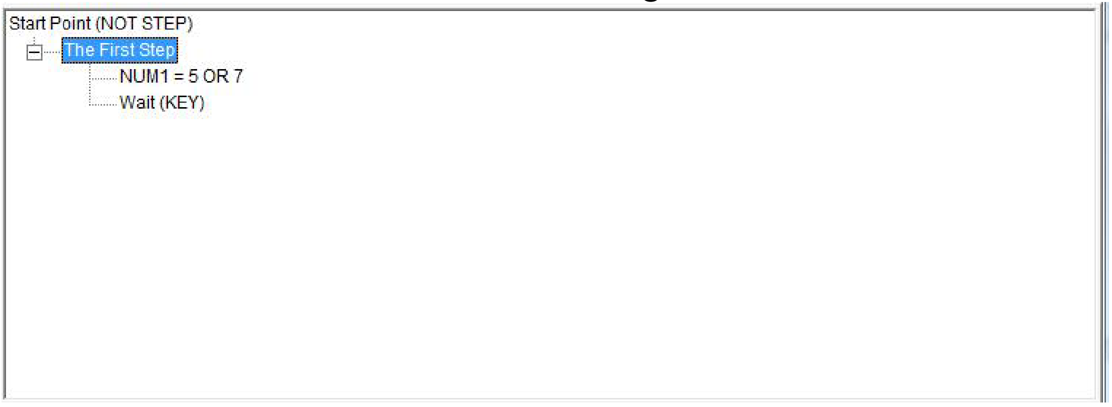
Bitwise logical OR operation on 16-bit numbers

Number / Variable: 5

Number/Variable: 7

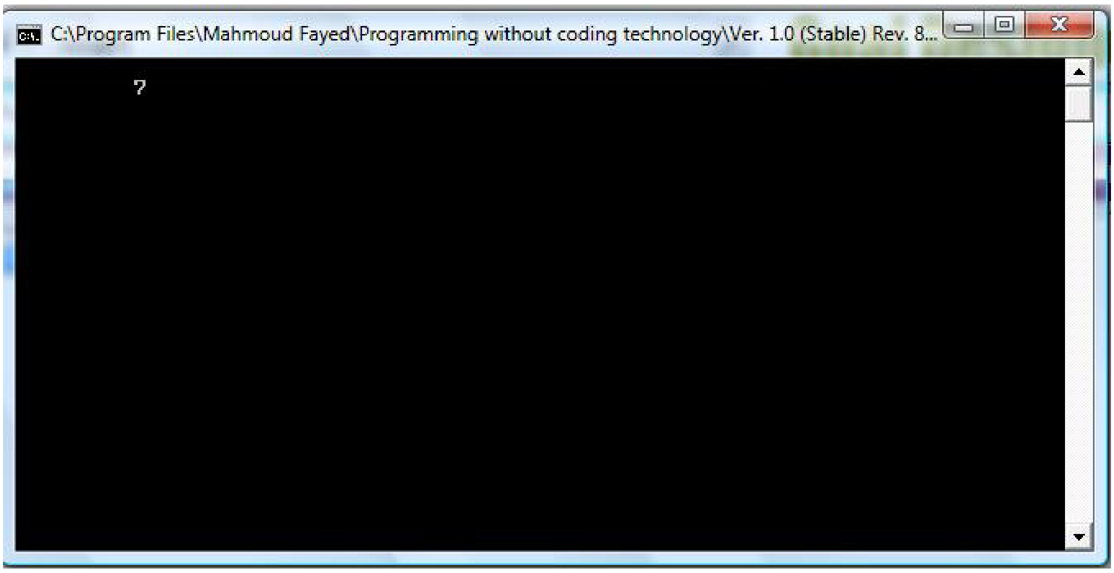
Result (Variable): NUM1

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      NUM1 = 5 OR 7
      Wait (KEY)
```

Final Steps Tree



C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

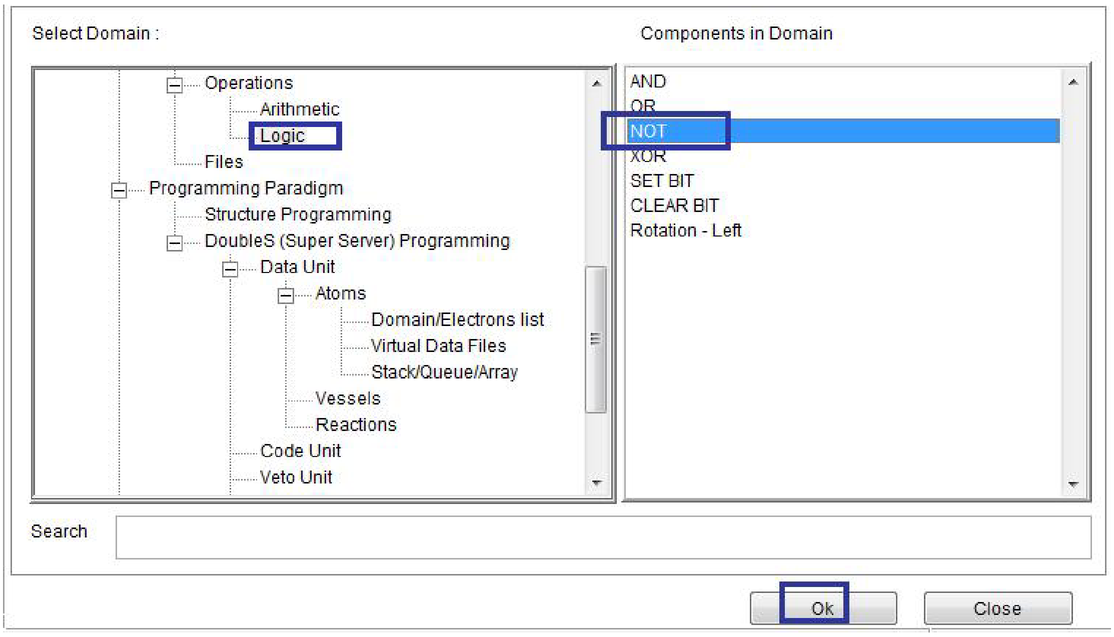
```
7
```

Final Application

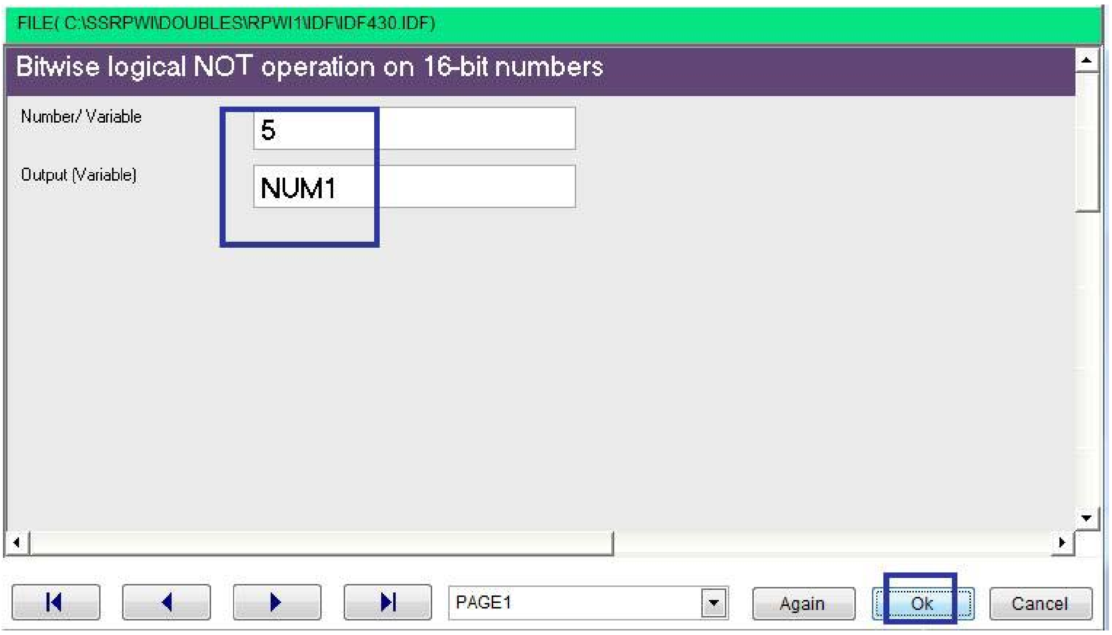
NOT

- Domain (Logic)
- Component (NOT)

Example - Screen shots:-



Domain (Logic) Component (NOT)

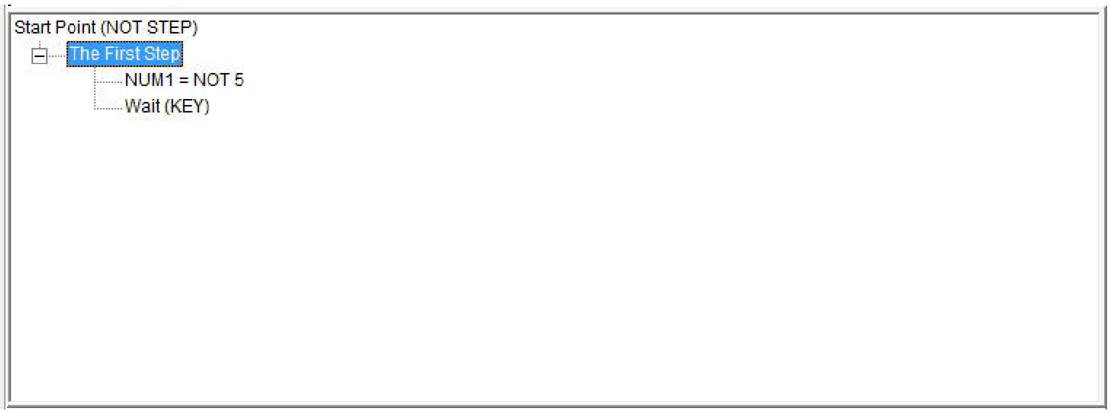

FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF430.IDF)

Bitwise logical NOT operation on 16-bit numbers

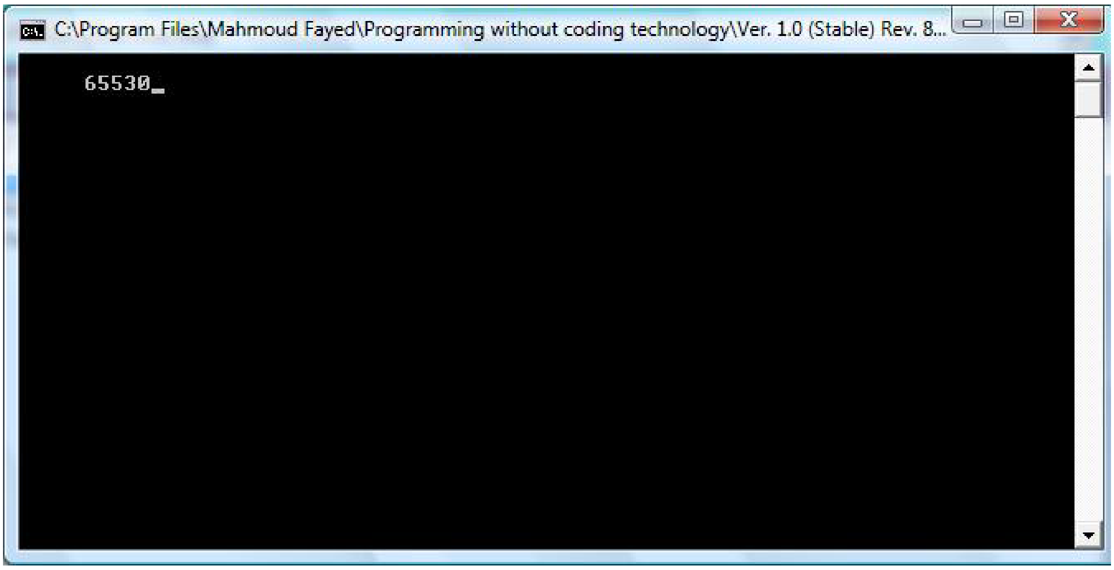
Number/ Variable: 5

Output (Variable): NUM1

Interaction Pages


Start Point (NOT STEP)
The First Step
NUM1 = NOT 5
Wait (KEY)

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

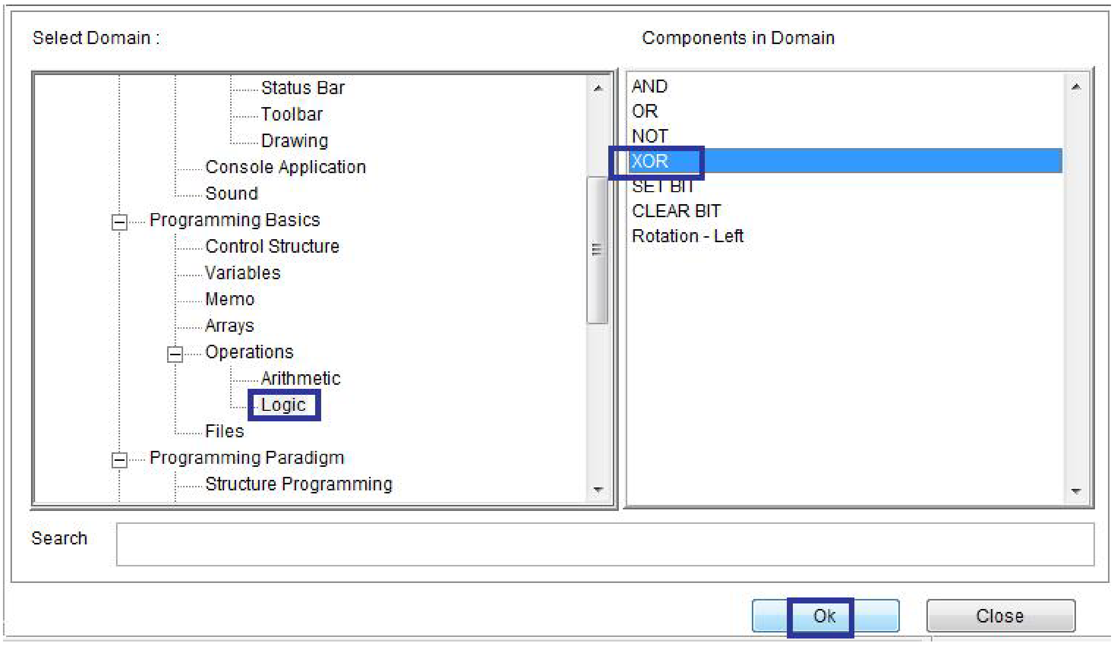
```
65530_
```

Final Application

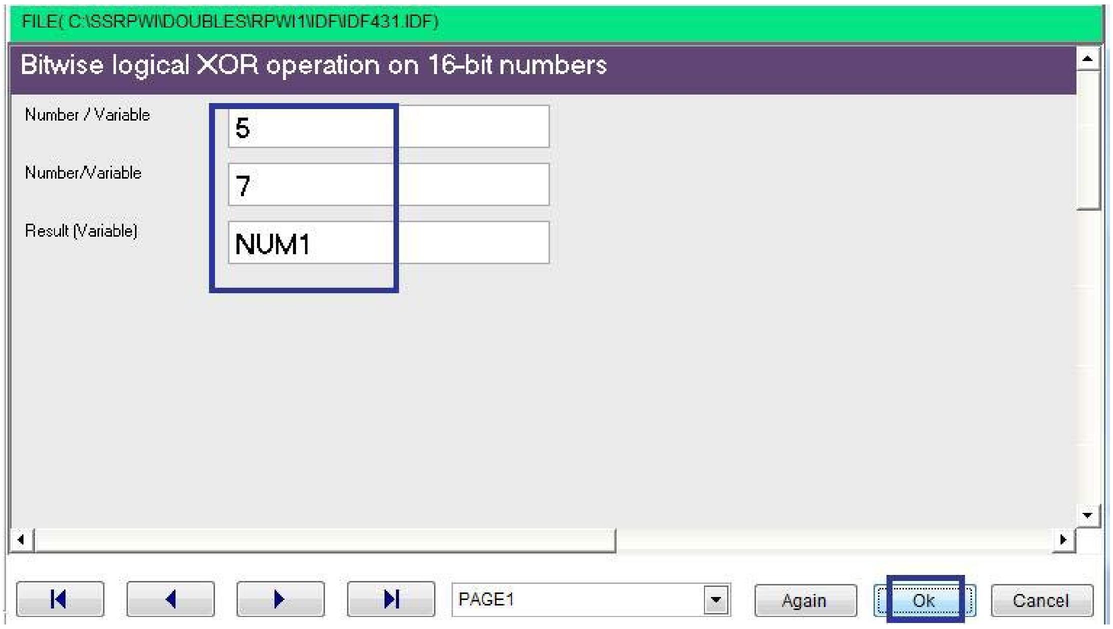
XOR

- Domain (Logic)
- Component (XOR)

Example - Screen shots:-



Domain (Logic) – Component (XOR)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF431.IDF)

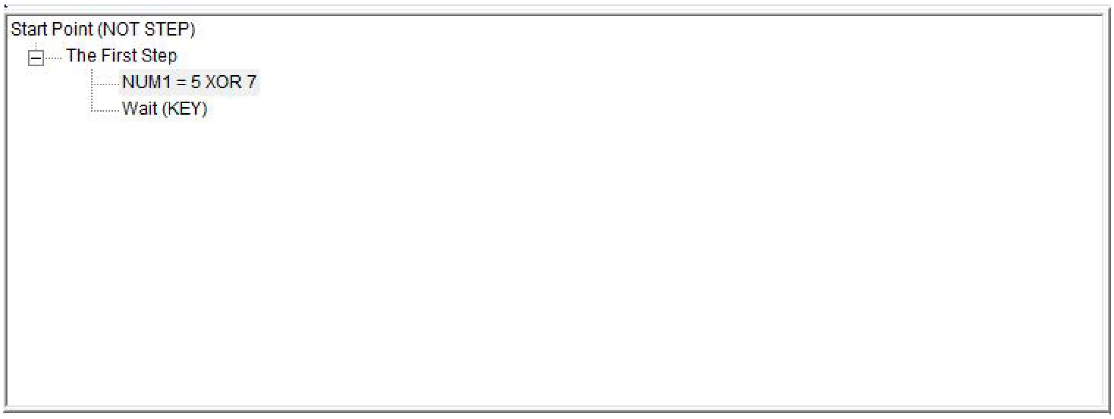
Bitwise logical XOR operation on 16-bit numbers

Number / Variable: 5

Number/Variable: 7

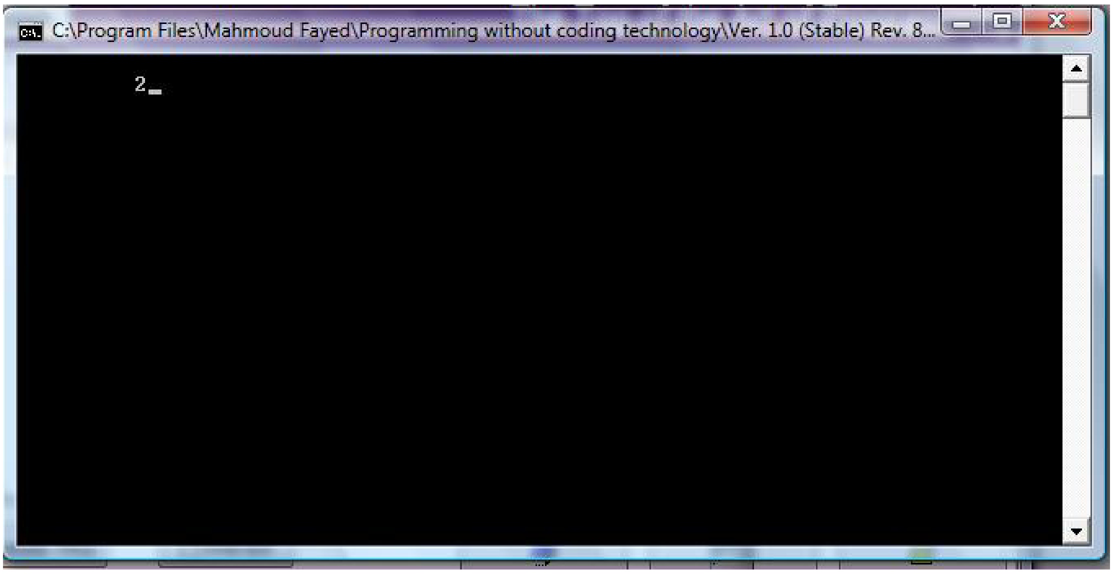
Result (Variable): NUM1

Interaction Page



Start Point (NOT STEP)
- The First Step
  - NUM1 = 5 XOR 7
  - Wait (KEY)

Final Steps Tree



C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

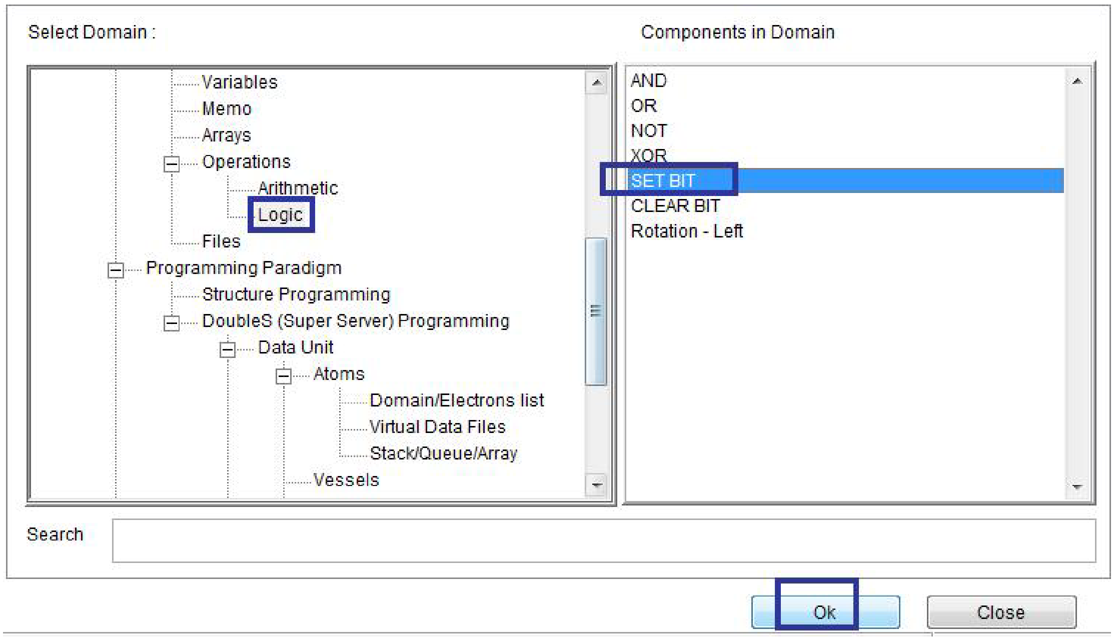
```
2_
```

The Final Application

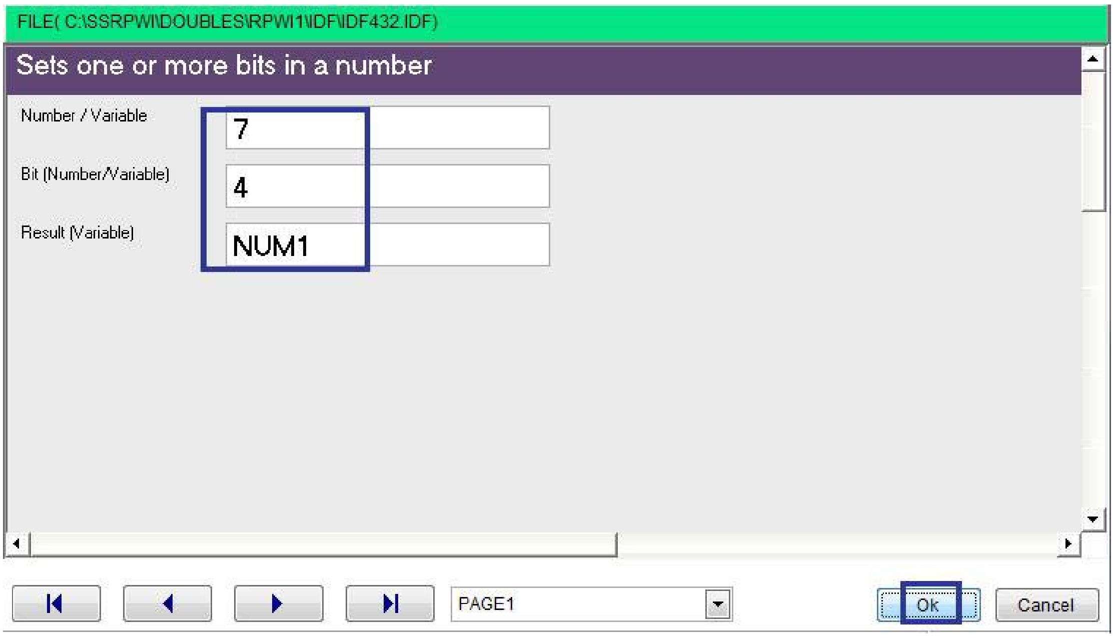
SET BIT

- Domain (Logic)
- Component (SET BIT)

Example - Screen shots:-



Domain (Logic) – Component (SET BIT)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF432.IDF)

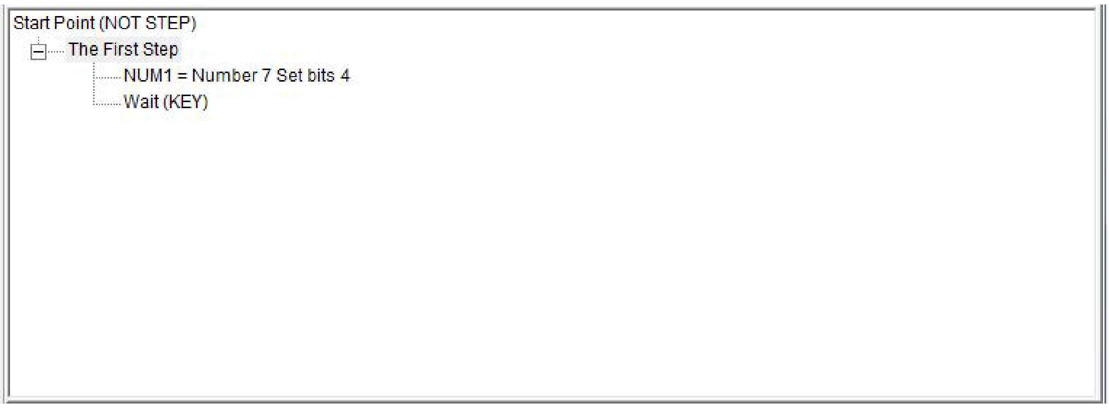
Sets one or more bits in a number

Number / Variable: 7

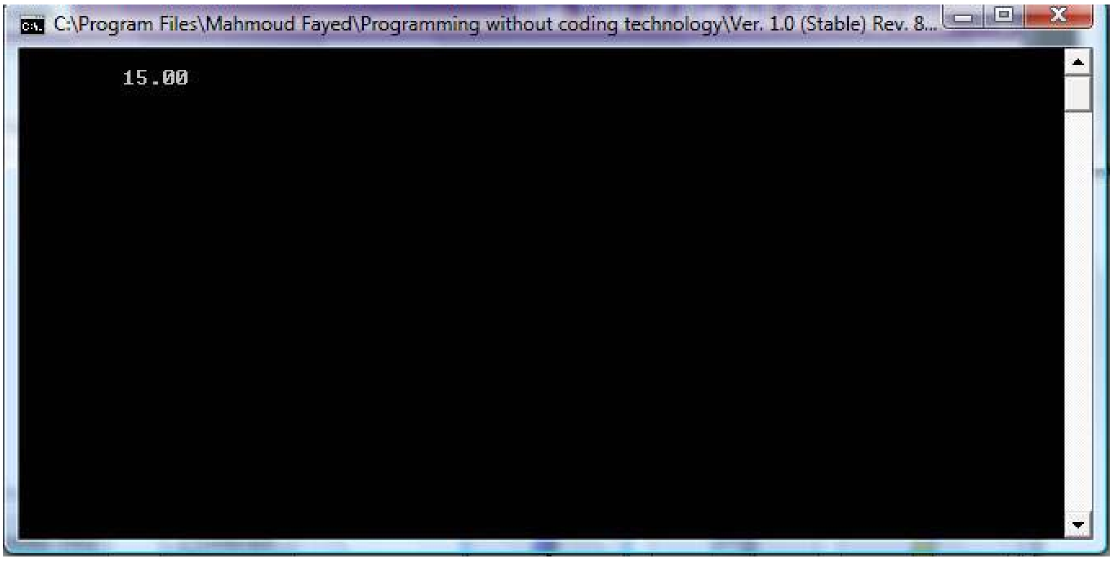
Bit (Number/Variable): 4

Result (Variable): NUM1

Interaction Page


Start Point (NOT STEP)
- The First Step
  - NUM1 = Number 7 Set bits 4
  - Wait (KEY)

Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

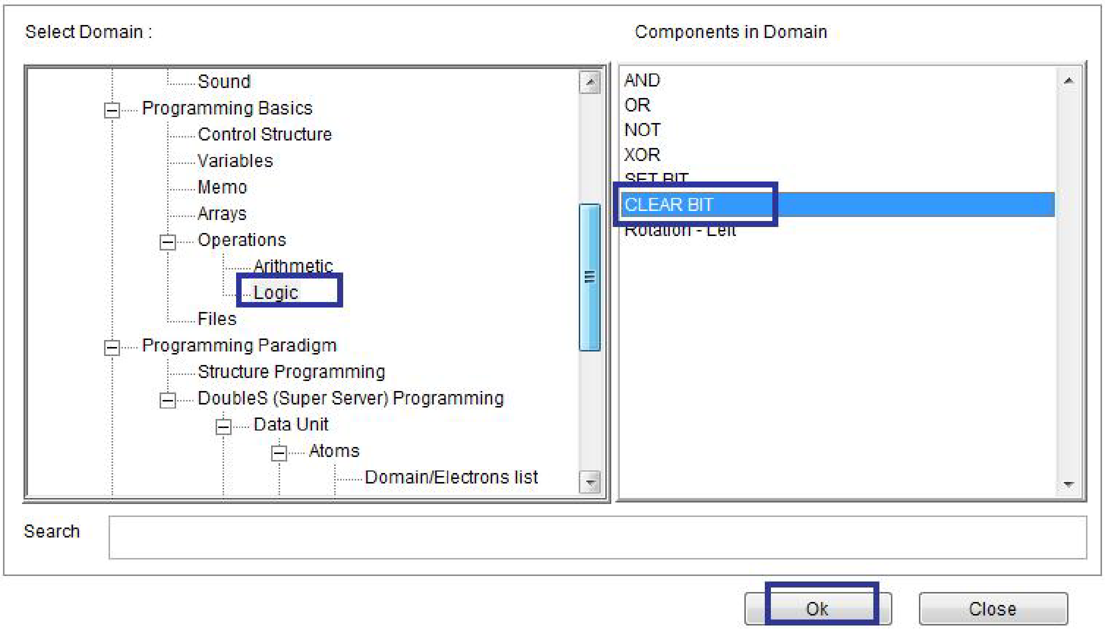
```
15.00
```

The Final Application

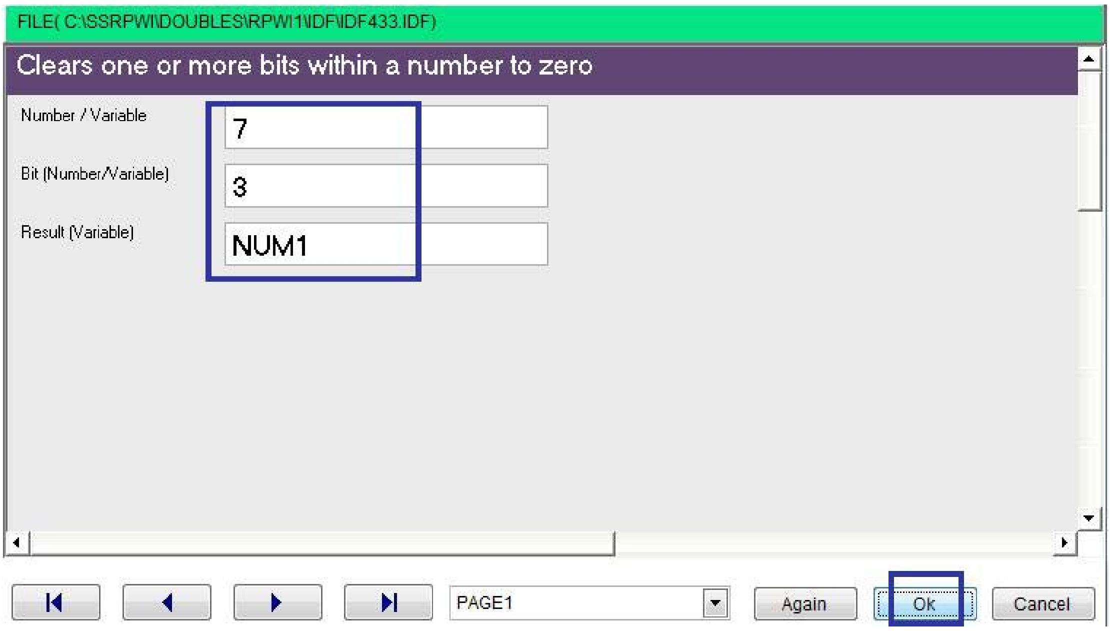
CLEAR BIT

- Domain (Logic)
- Component (CLEAR BIT)

Example - Screen shots:-



Domain (Logic) Component (CLEAR BIT)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF433.IDF)

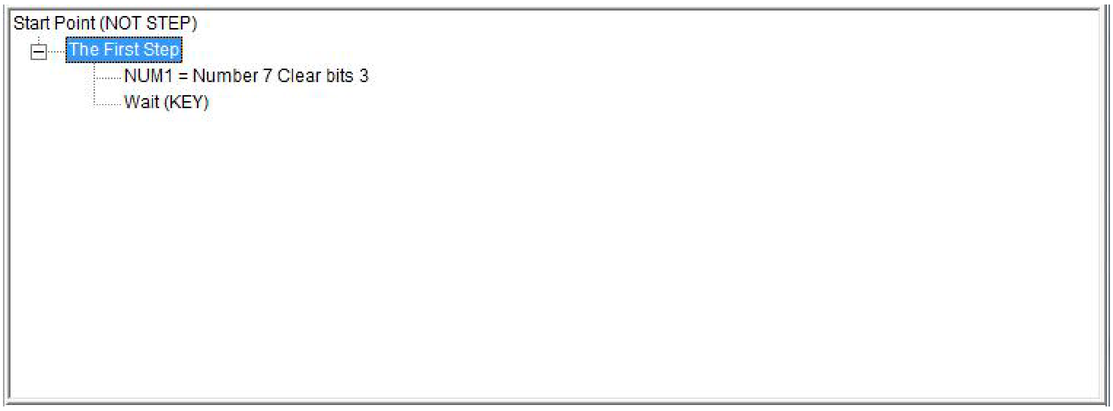
Clears one or more bits within a number to zero

Number / Variable: 7

Bit (Number/Variable): 3

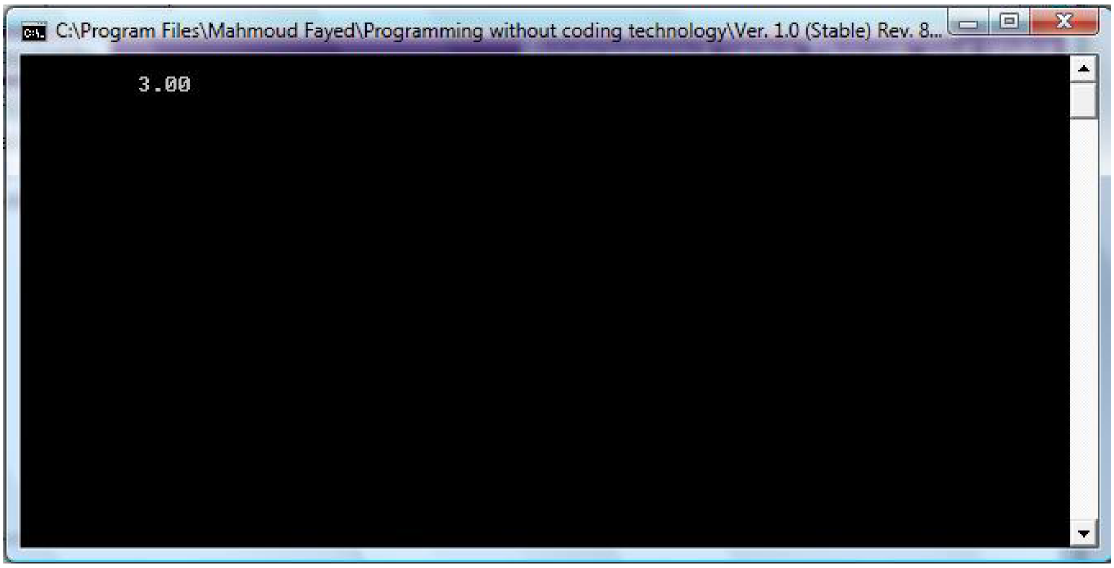
Result (Variable): NUM1

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      NUM1 = Number 7 Clear bits 3
      Wait (KEY)
```

Final Steps Tree



C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

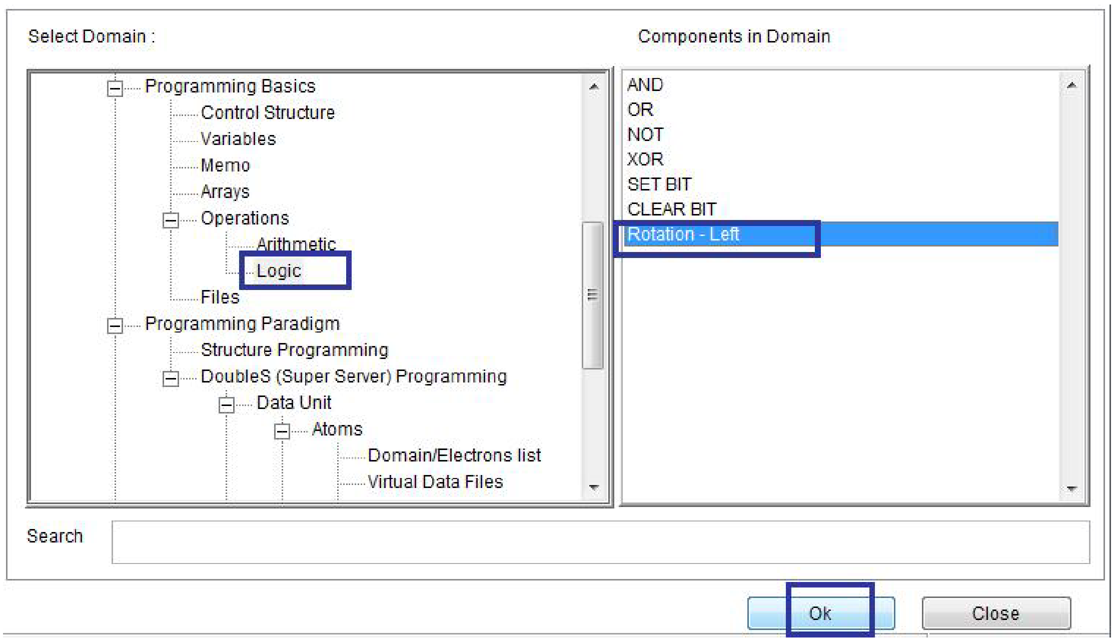
```
         3.00
```

The Final Application

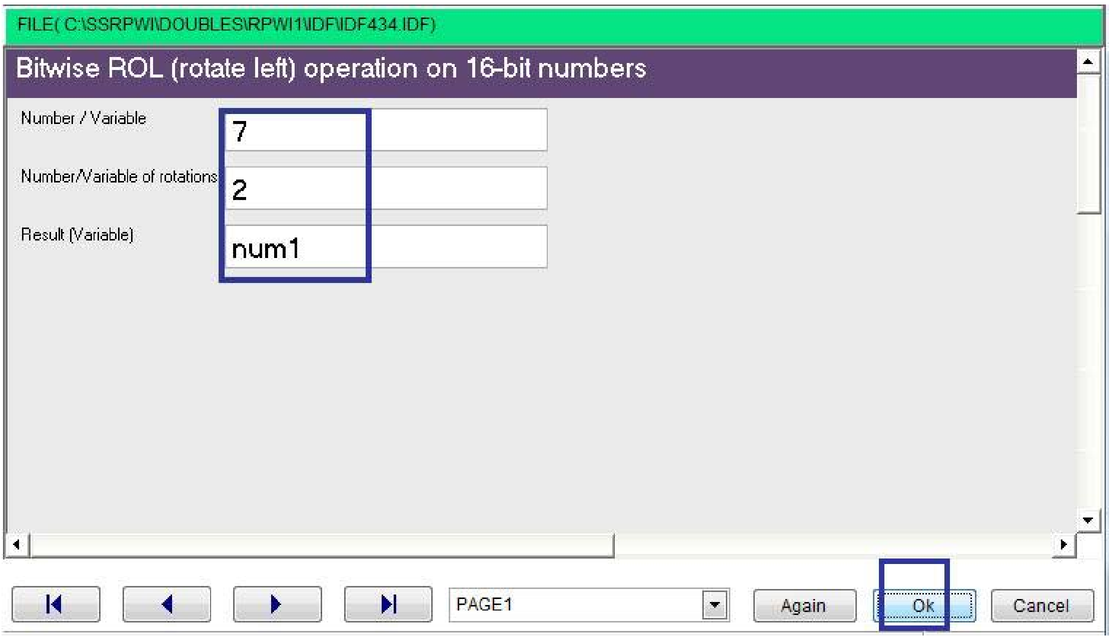
ROTATION – LEFT

- Domain (Logic)
- Component (ROTATION - LEFT)

Example - Screen shots:-



Domain(Logic) Component (Rotation – Left)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF434.IDF)

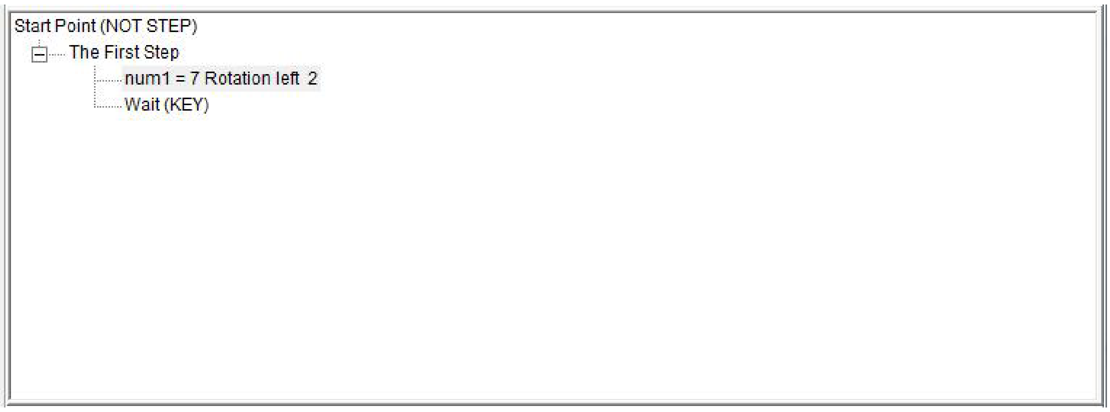
Bitwise ROL (rotate left) operation on 16-bit numbers

Number / Variable: 7

Number/Variable of rotations: 2

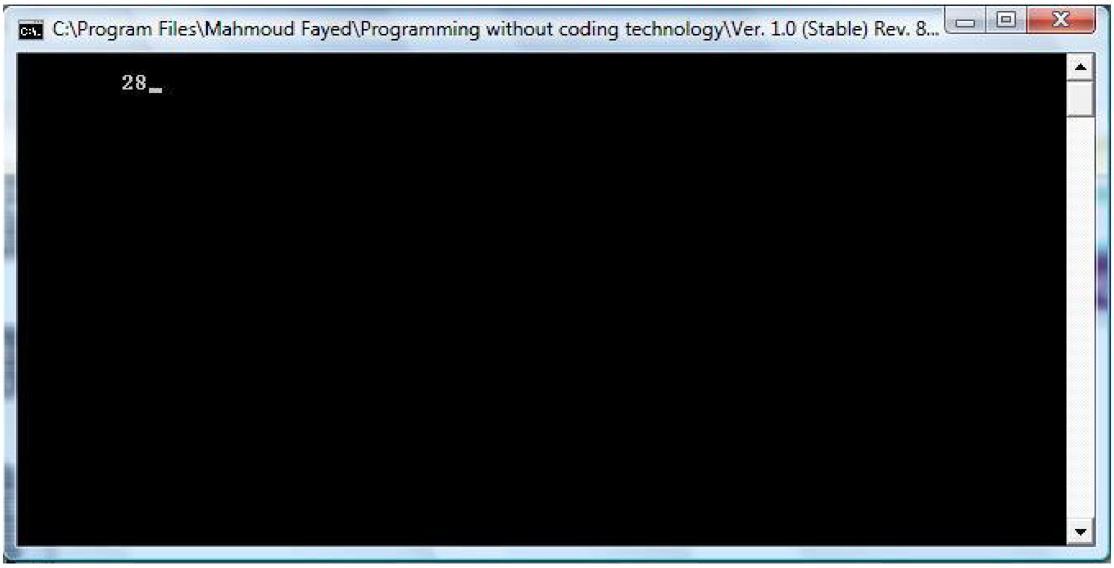
Result (Variable): num1

Interaction Page



- Start Point (NOT STEP)
  - The First Step
    - num1 = 7 Rotation left 2
    - Wait (KEY)

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

```
28_
```

The Final Application

Expressions

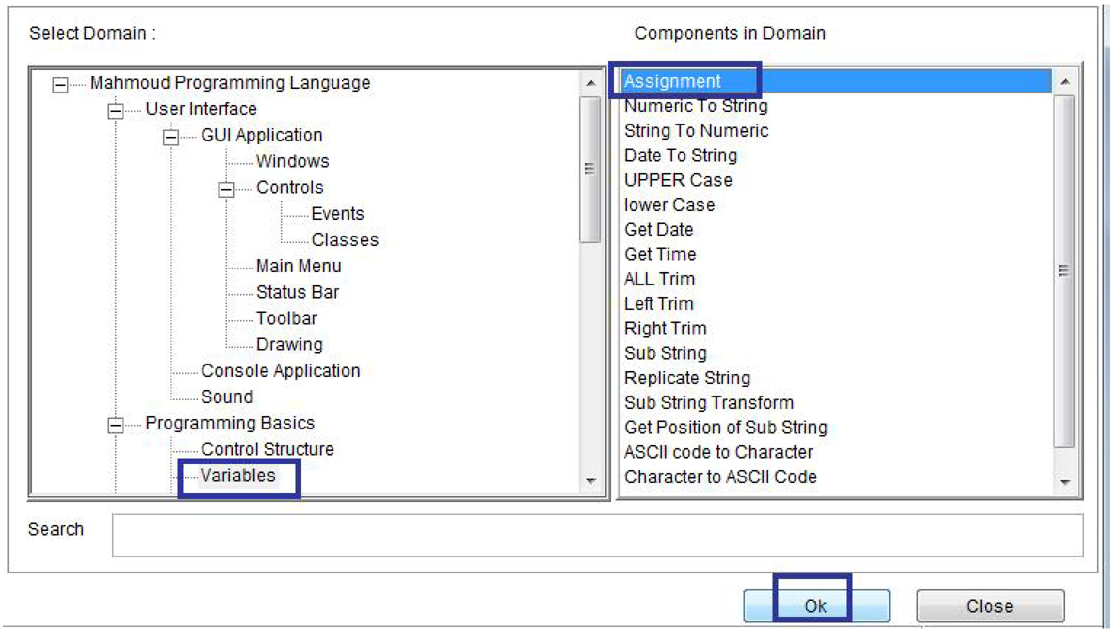
You can build expressions by mixing data, variables & operators (arithmetic & logic)

Examples:

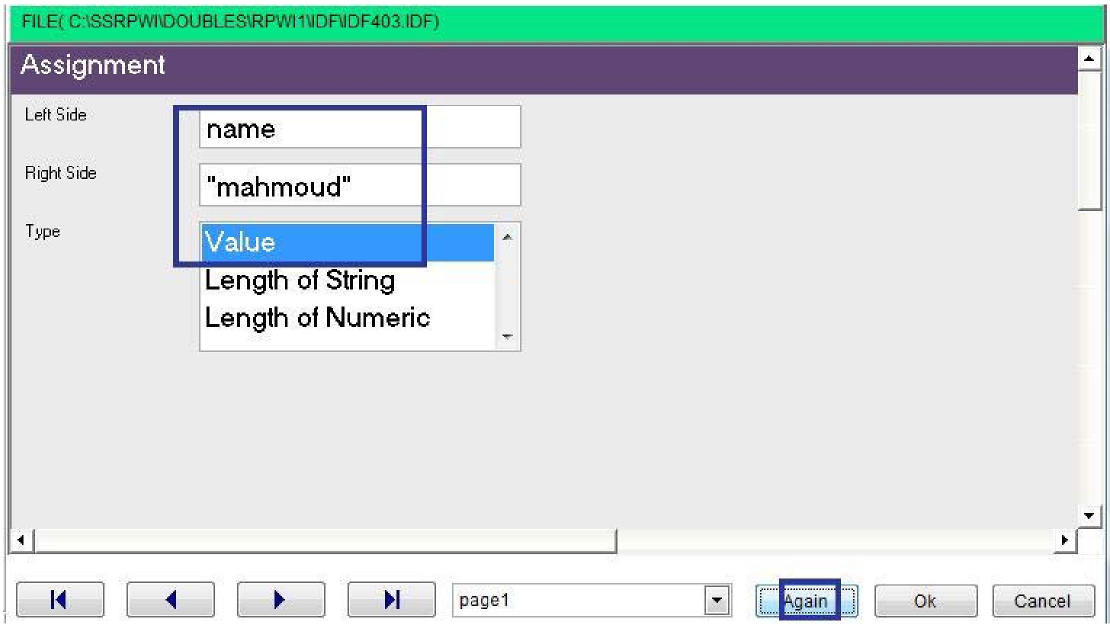
- "Hello " + cName
- (3 + num1) * (5 + num2)
- (.T. .AND. .F.) .OR. (.F. .OR. .T.)

.T.	Logical True
.F.	Logical False
.AND.	Logical AND
.NOT.	Logical NOT
.OR.	Logical OR

Example - Screen shots:-



Domain (Variables) Component (Assignment)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

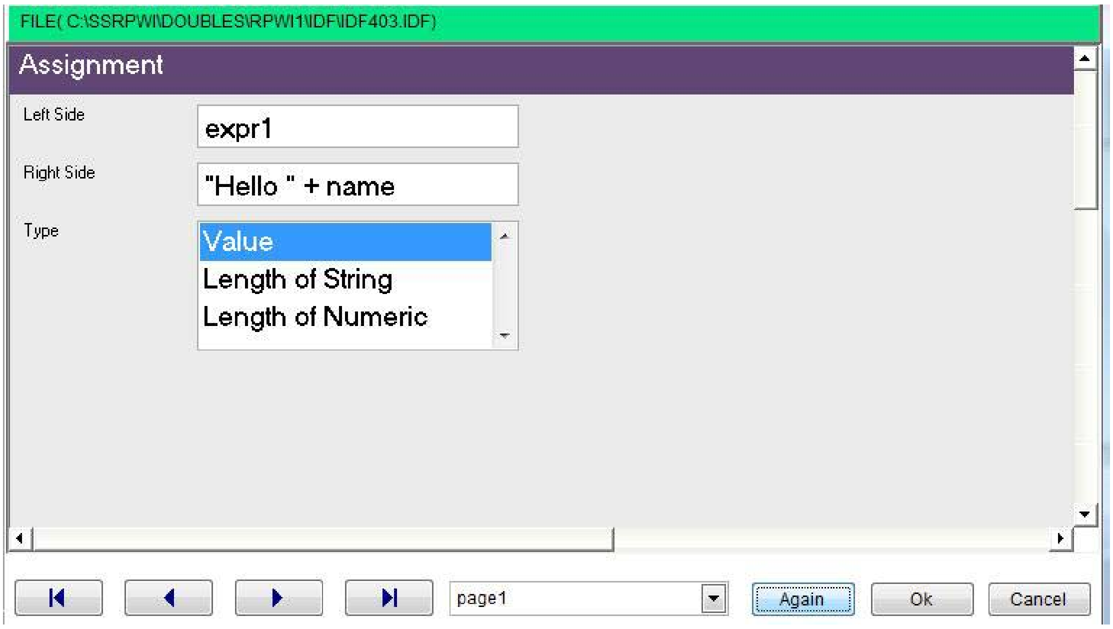
Assignment

Left Side: name

Right Side: "mahmoud"

Type: Value

Inteaction Page



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

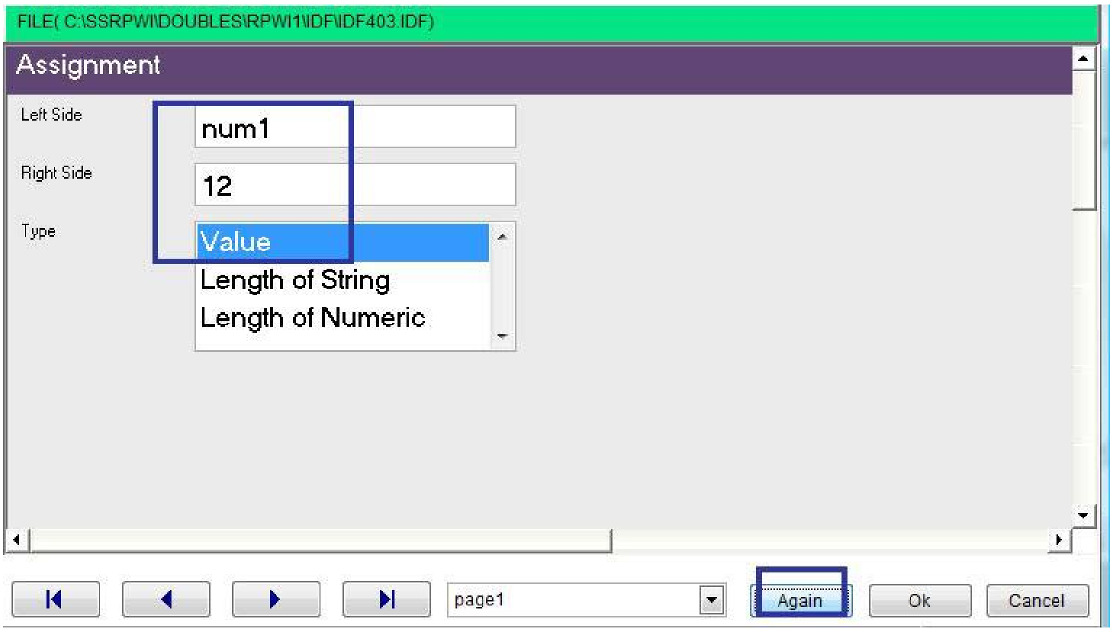
Assignment

Left Side: expr1

Right Side: "Hello " + name

Type: Value

Interaction Page



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

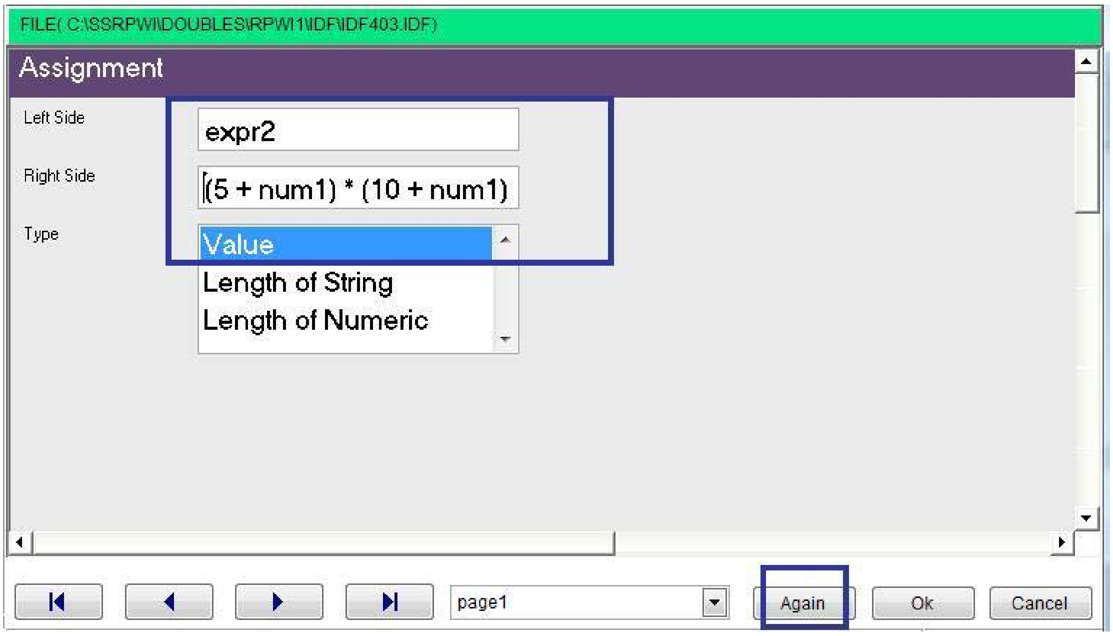
Assignment

Left Side: num1

Right Side: 12

Type: Value

Interaction Page


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

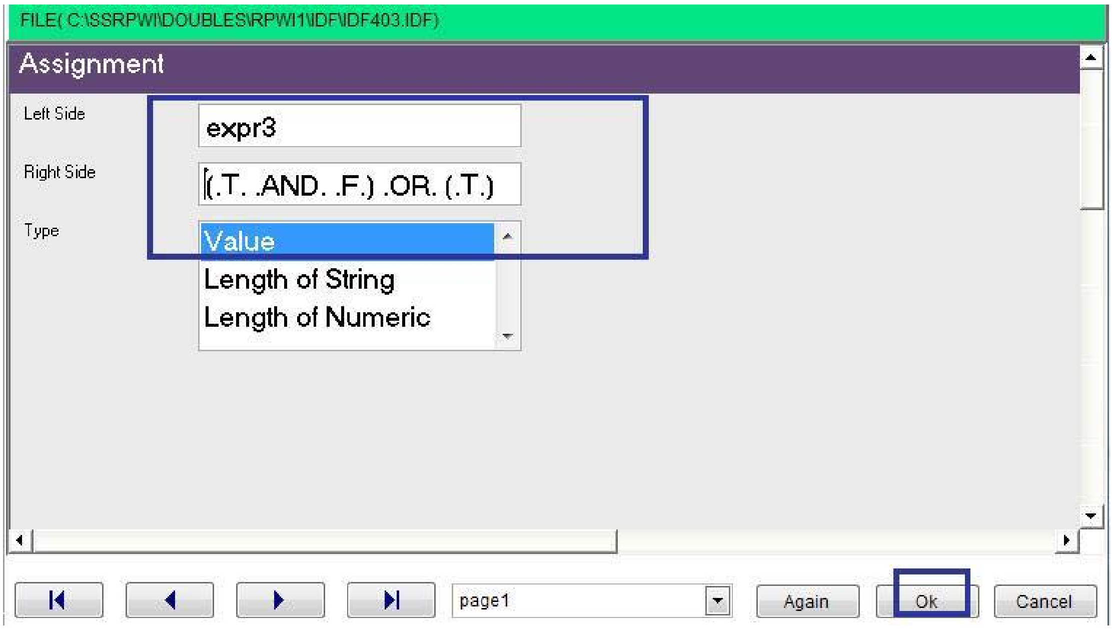
Assignment

Left Side: expr2

Right Side: (5 + num1) * (10 + num1)

Type: Value

Interaction Page


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

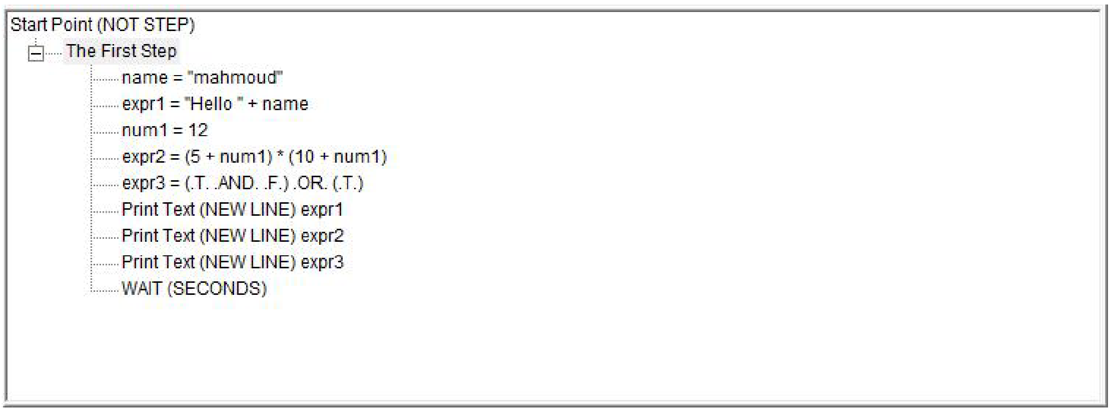
Assignment

Left Side: expr3

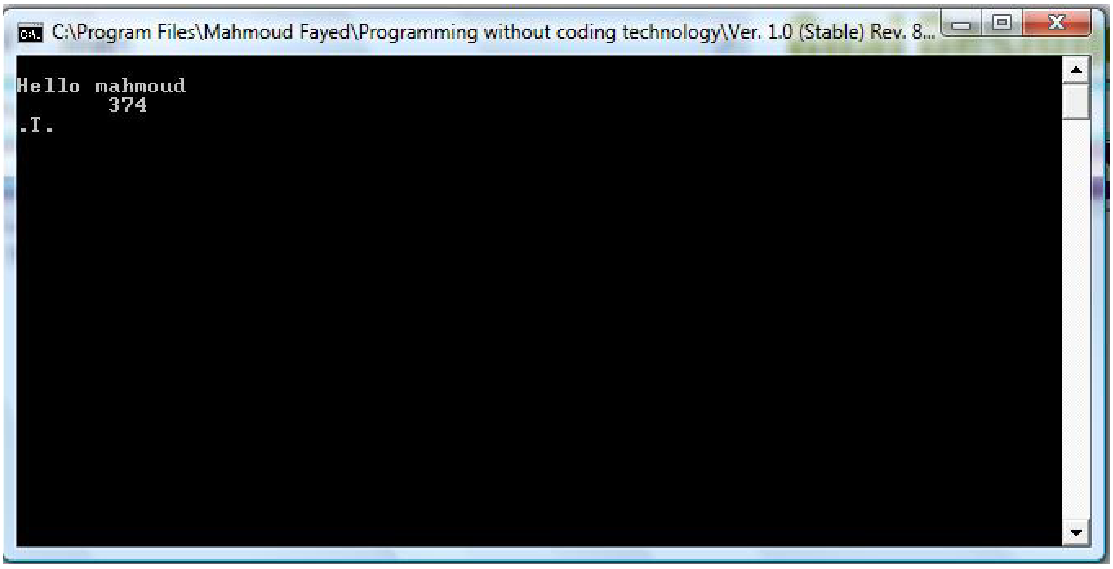
Right Side: (.T. .AND. .F.) .OR. (.T.)

Type: Value

Interaction Page


- Start Point (NOT STEP)
  - The First Step
    - name = "mahmoud"
    - expr1 = "Hello " + name
    - num1 = 12
    - expr2 = (5 + num1) * (10 + num1)
    - expr3 = (.T. .AND. .F.) .OR. (.T.)
    - Print Text (NEW LINE) expr1
    - Print Text (NEW LINE) expr2
    - Print Text (NEW LINE) expr3
    - WAIT (SECONDS)

The final Steps tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

```
Hello mahmoud
       374
.T.
```

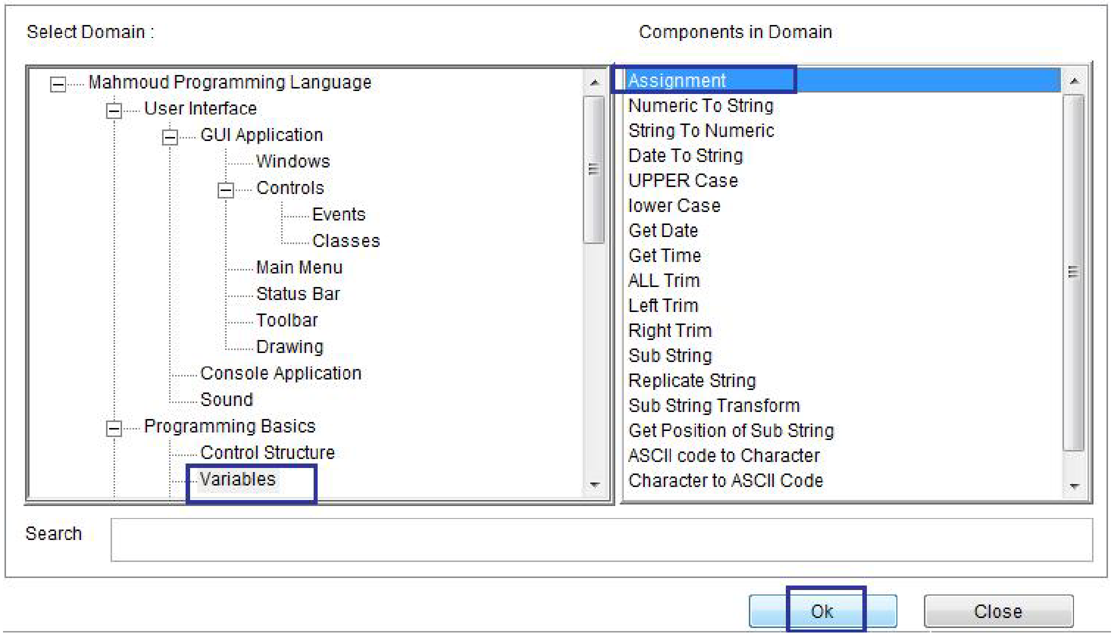
The final application

Macro

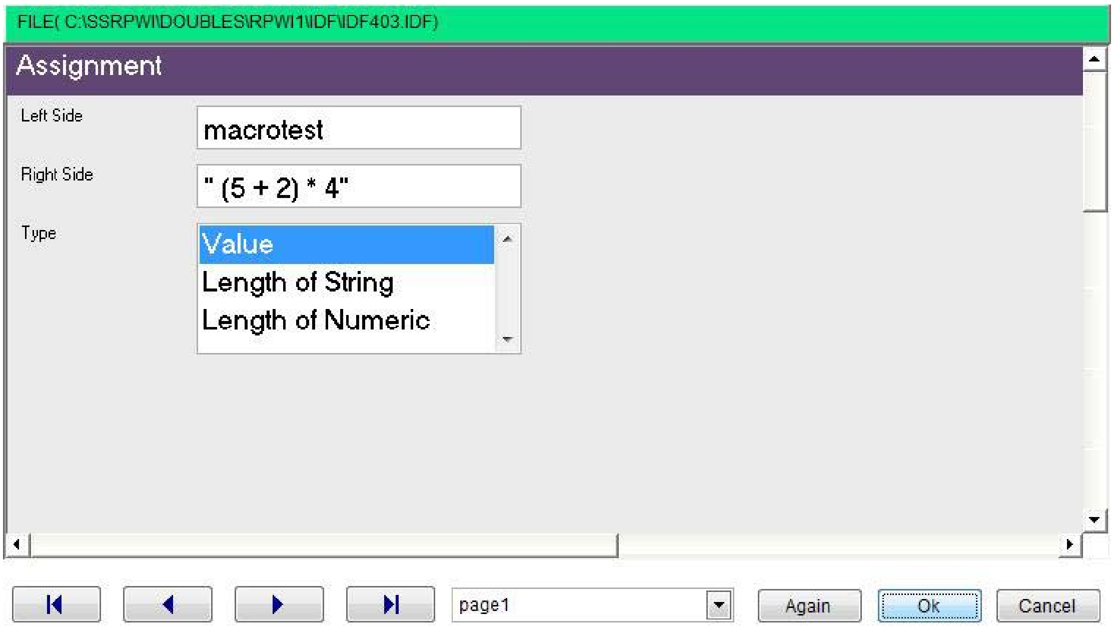
One of the most powerful features is the MACRO Operator '&'

Allows for runtime compilation of any valid expression Such compiled expression may be used as a VALUE, i.e. the right side of an Assignment, but more interestingly, such compiled expression may be used to resolve the LEFT side of an assignment, i.e. variables, or Database FIELD. Additionally the Macro Operator may compile and execute function calls, complete assignments, or even list of arguments, and the result of the macro may be used to resolve any of the above contexts in the compiled application.

Example - Screen shots:-



Domain Name (Variables) – Component (Assignment)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF403.IDF)

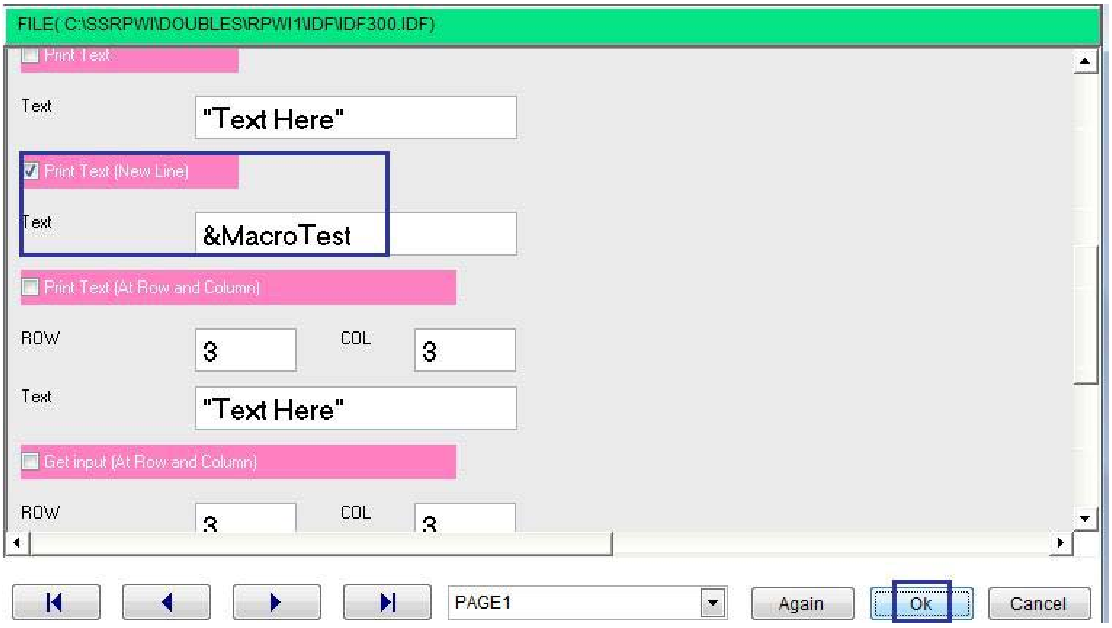
Assignment

Left Side: macrotest

Right Side: " (5 + 2) * 4"

Type: **Value** (selected) / Length of String / Length of Numeric

Interaction Page



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF300.IDF)

☐ Print Text

Text: "Text Here"

☑ Print Text (New Line)

Text: &MacroTest

☐ Print Text (At Row and Column)

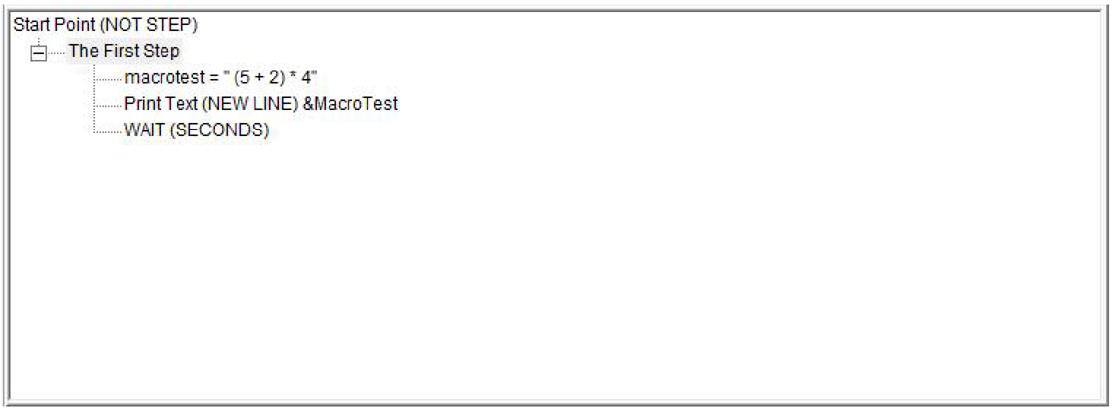
ROW: 3 COL: 3

Text: "Text Here"

☐ Get input (At Row and Column)

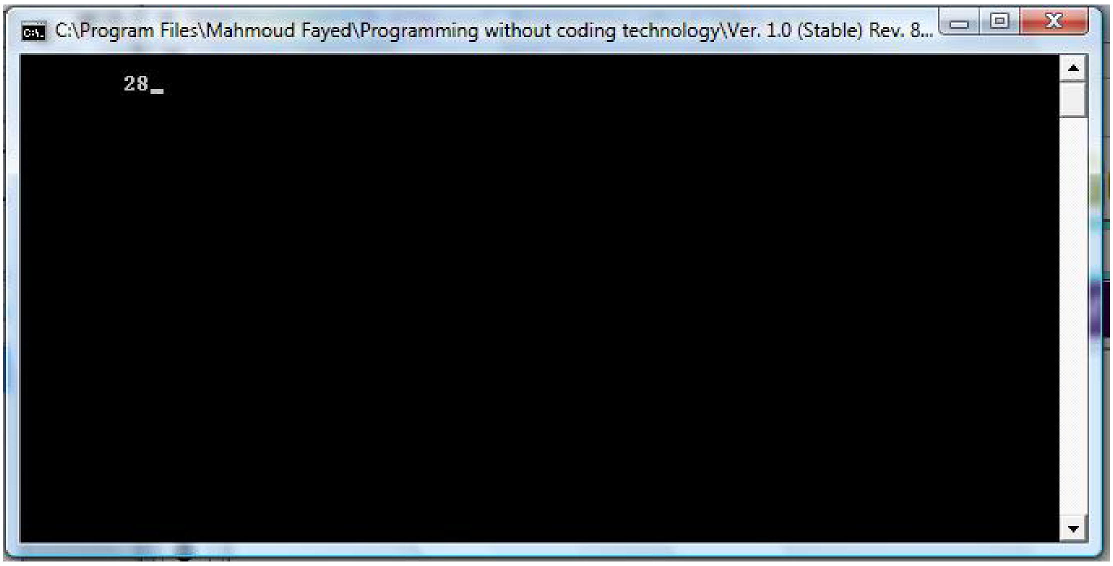
ROW: 3 COL: 3

Interaction Pages



Start Point (NOT STEP)
- The First Step
  - macrotest = " (5 + 2) * 4"
  - Print Text (NEW LINE) &MacroTest
  - WAIT (SECONDS)

Final Steps Tree


C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

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28_
```

The Final Application

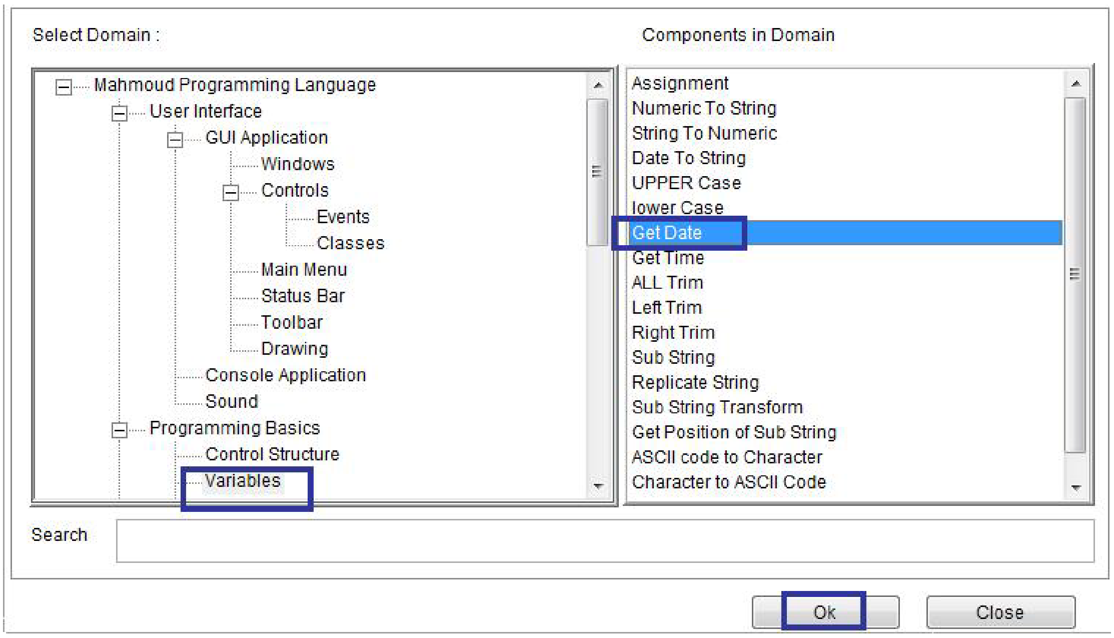
Date & Time

Components:-

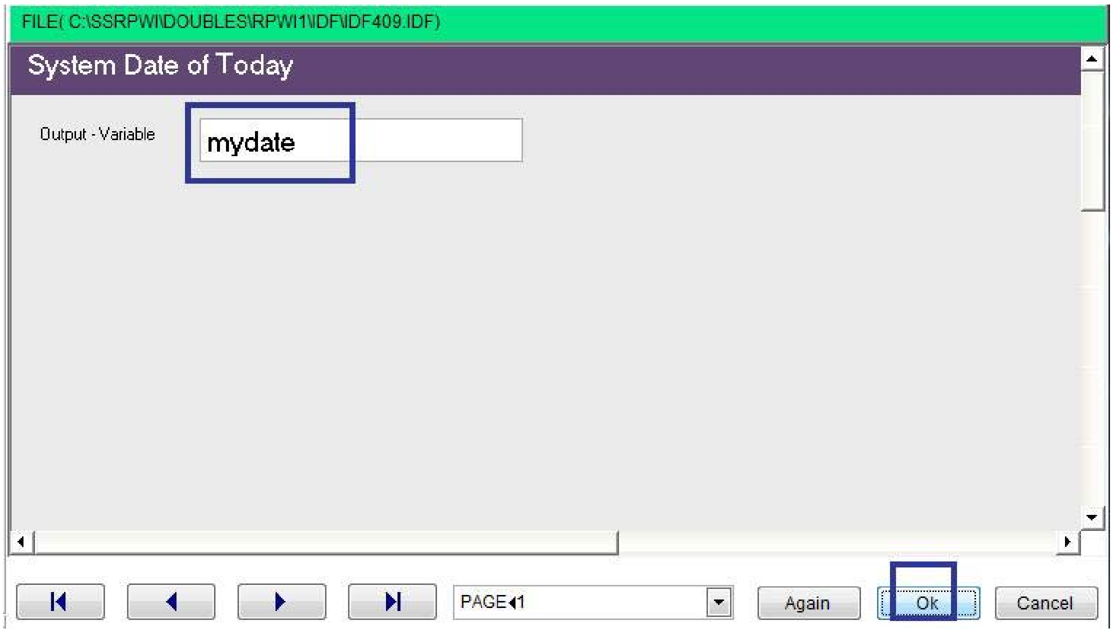
- Get Date
- Get Time

Get Date

Example - Screen shots:-



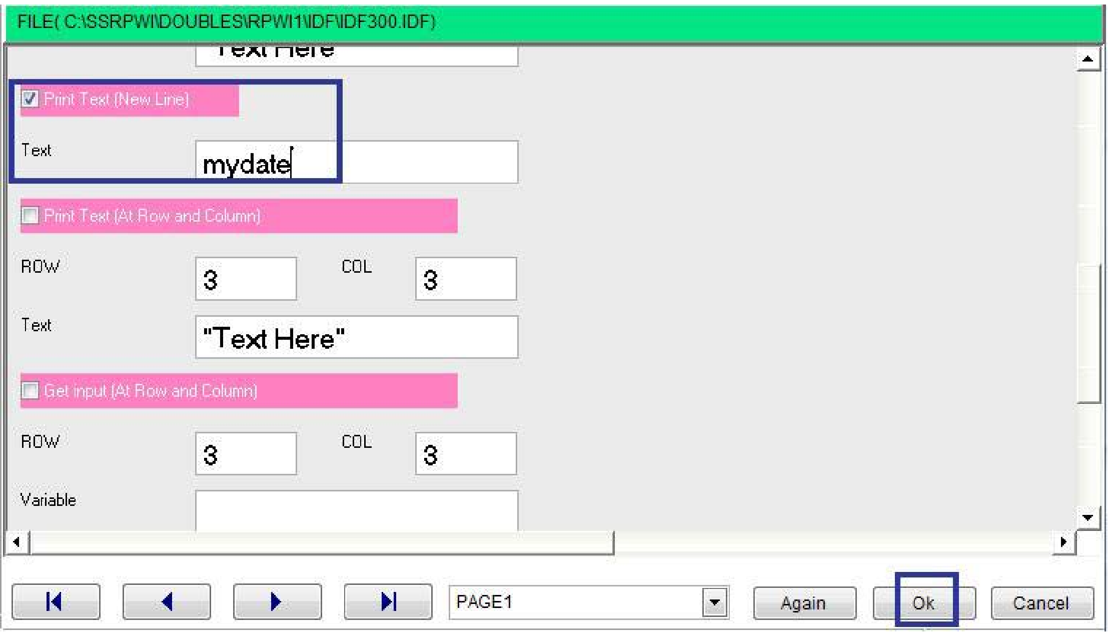
Domain (Variables) – Component (Get Date)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF409.IDF)

System Date of Today

Output - Variable: mydate

Interaction Page


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF300.IDF)

☑ Print Text (New Line)

Text: mydate

☐ Print Text (At Row and Column)

ROW: 3 COL: 3

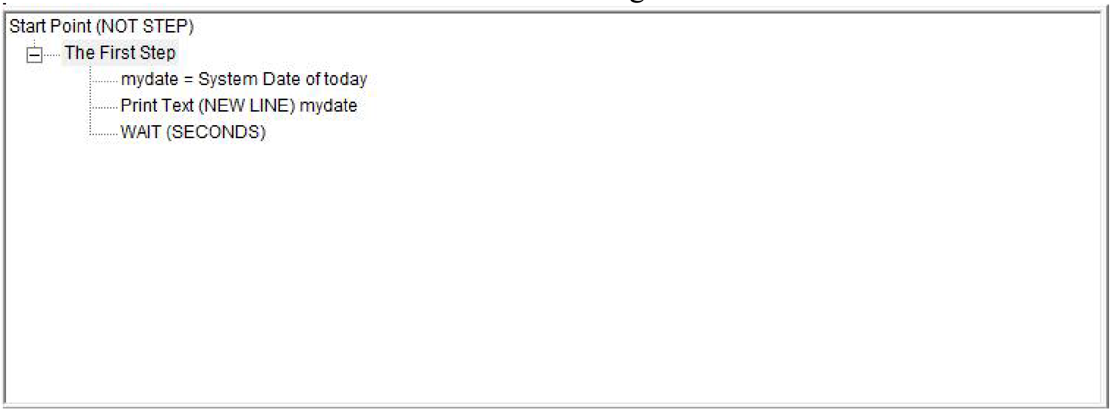
Text: "Text Here"

☐ Get input (At Row and Column)

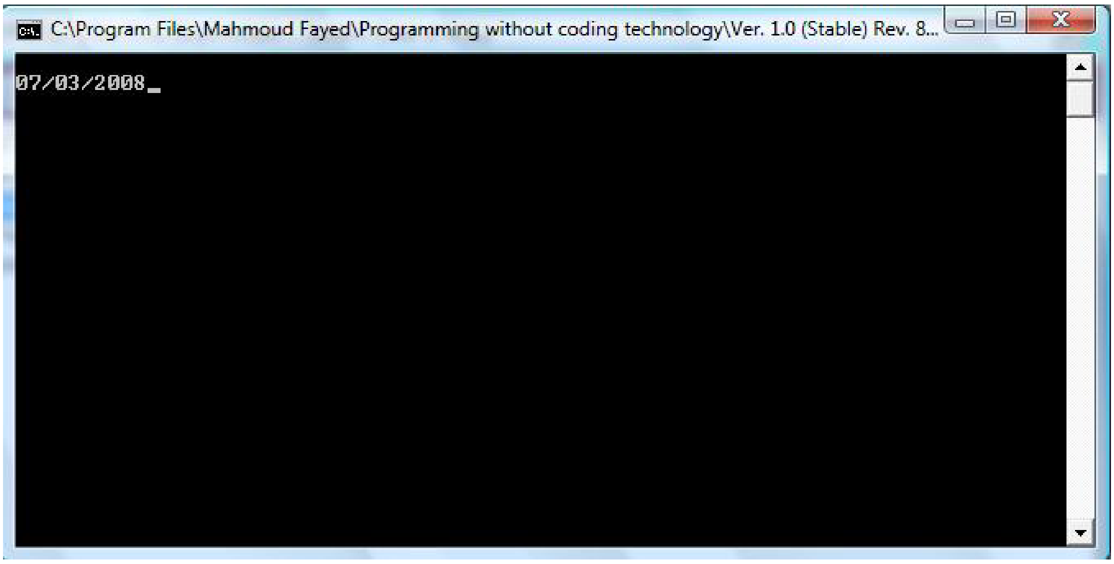
ROW: 3 COL: 3

Variable:

Interaction Page


```
Start Point (NOT STEP)
  The First Step
        mydate = System Date of today
        Print Text (NEW LINE) mydate
        WAIT (SECONDS)
```

Final Steps Tree

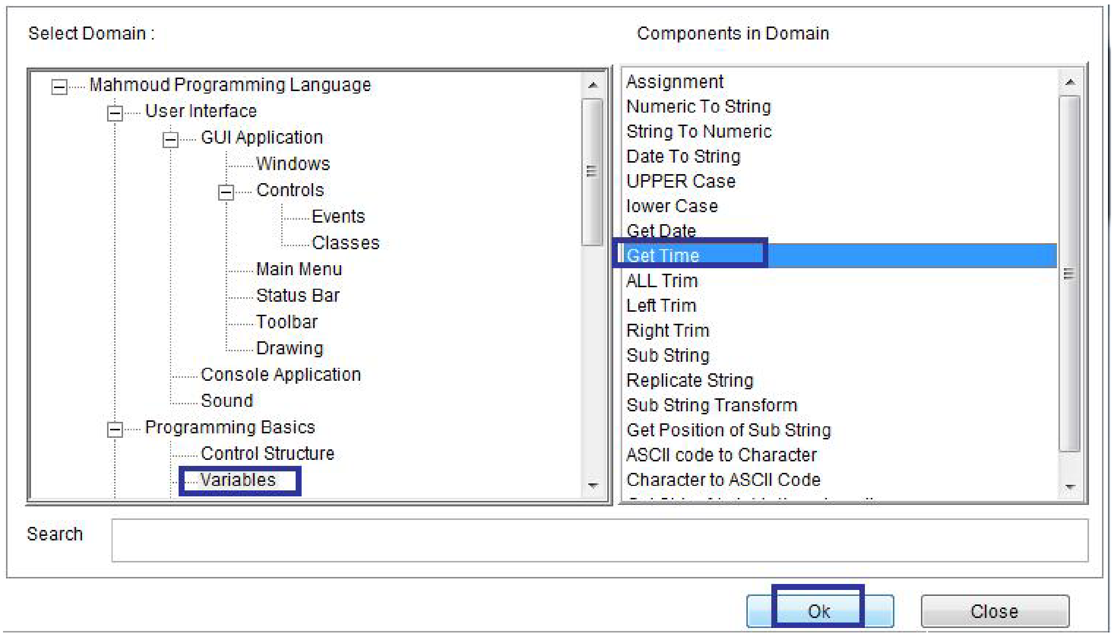

C:\Program Files\Mahmoud Fayed\Programming without coding technology\Ver. 1.0 (Stable) Rev. 8...

```
07/03/2008_
```

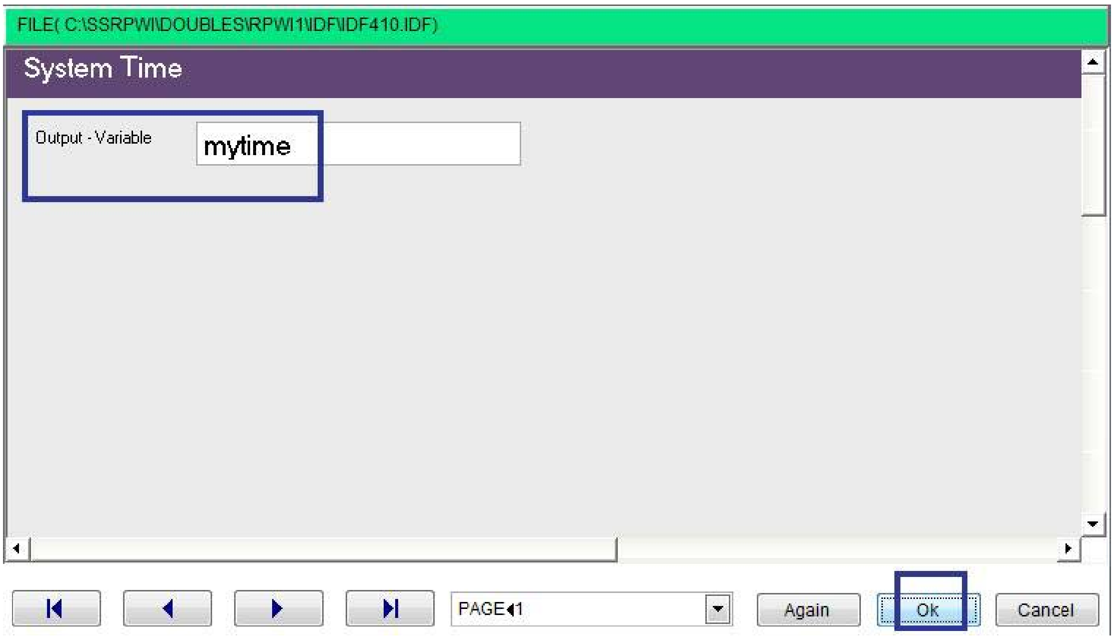
The Final Applications

Get Time

Example - Screen shots:-



Domain (Variables) – Component (Get Time)

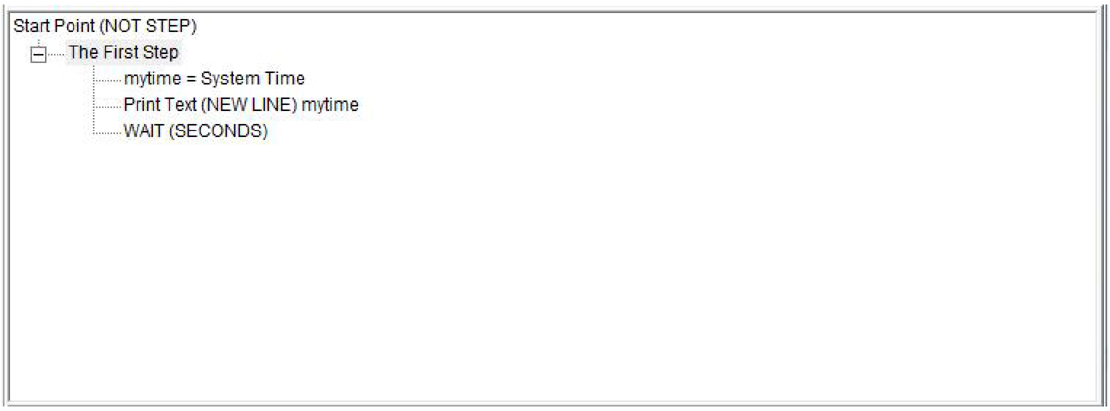


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF410.IDF)

System Time

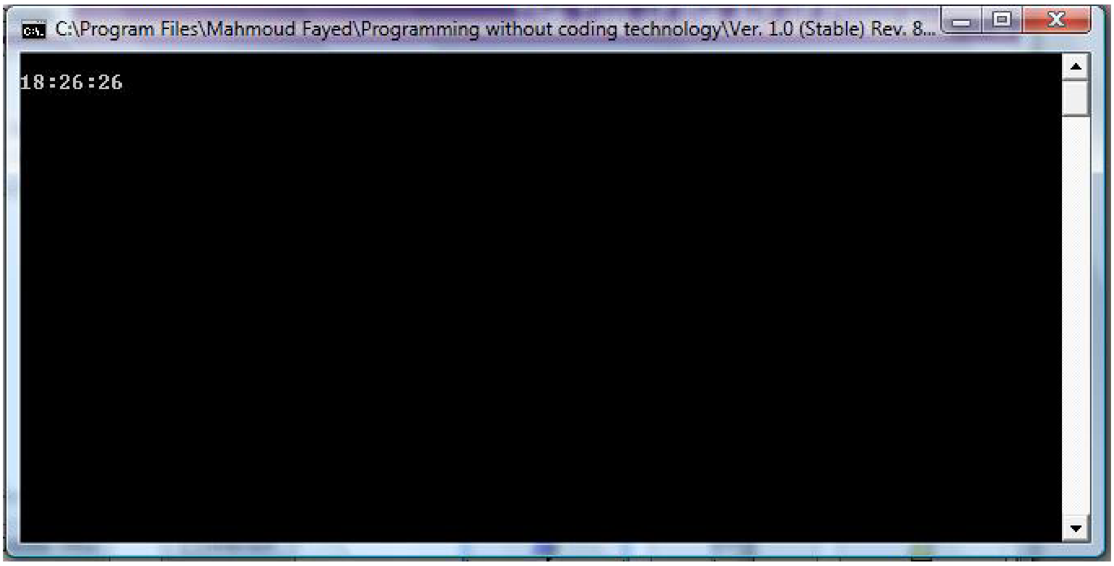
Output - Variable: mytime

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      mytime = System Time
      Print Text (NEW LINE) mytime
      WAIT (SECONDS)
```

Steps Tree



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```
18:26:26
```

The Final Steps

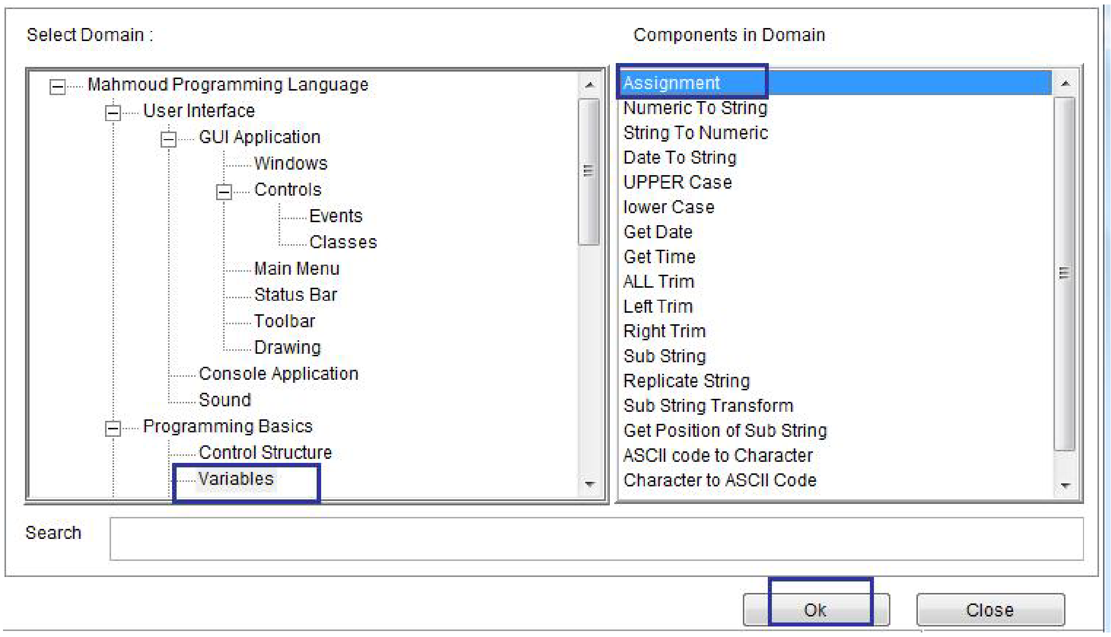
Converting between data types

- Numeric to String
- String to Numeric
- Date to String

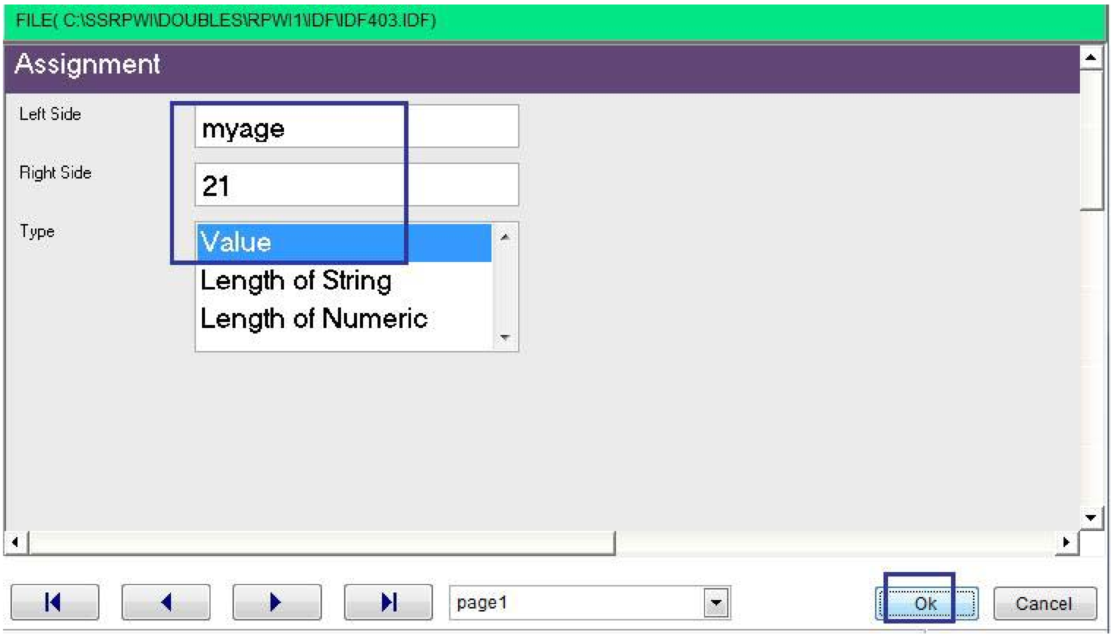
Numeric to String

- Domain (Variables)
- Component (Numeric to String)

Example - Screen shots:-



Domain (Variables) – Component (Assignment)

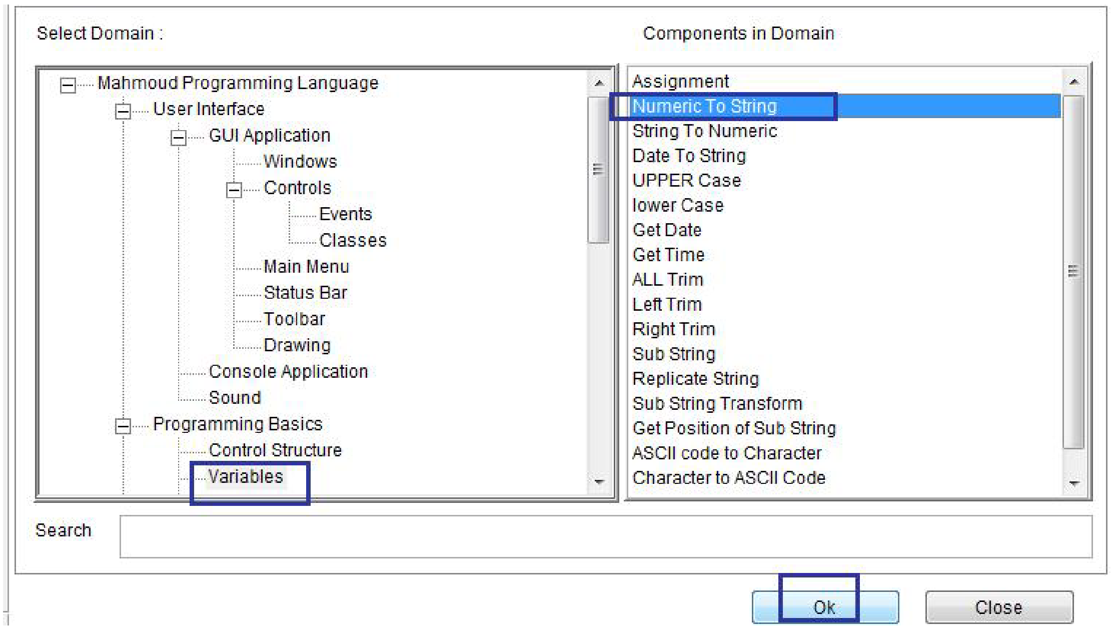


Left Side: myage

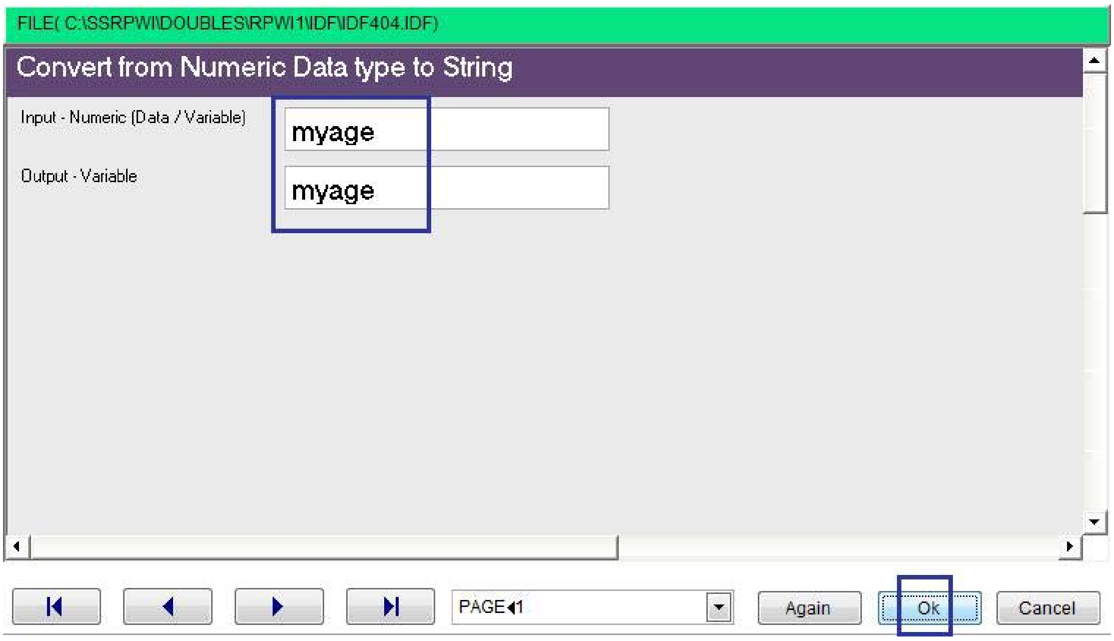
Right Side: 21

Type: Value

Interaction Page



Component (Variables) – Component (Numeric to String)

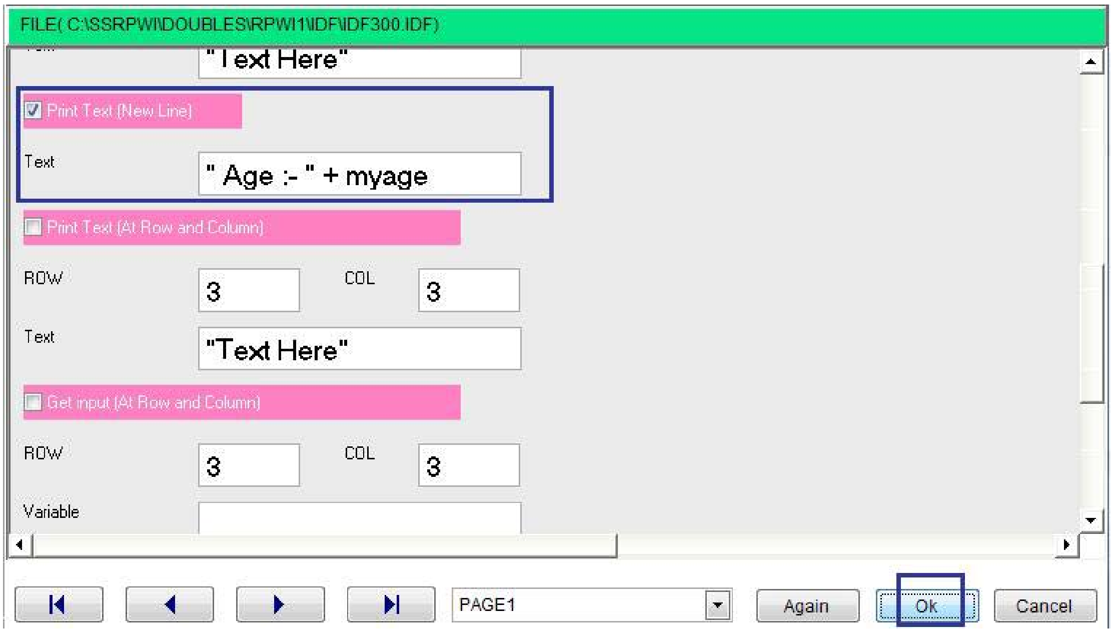

FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF404.IDF)

Convert from Numeric Data type to String

Input - Numeric (Data / Variable) myage

Output - Variable myage

Interaction Page



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF300.IDF)

"Text Here"

☑ Print Text (New Line)

Text " Age :- " + myage

☐ Print Text (At Row and Column)

ROW 3 COL 3

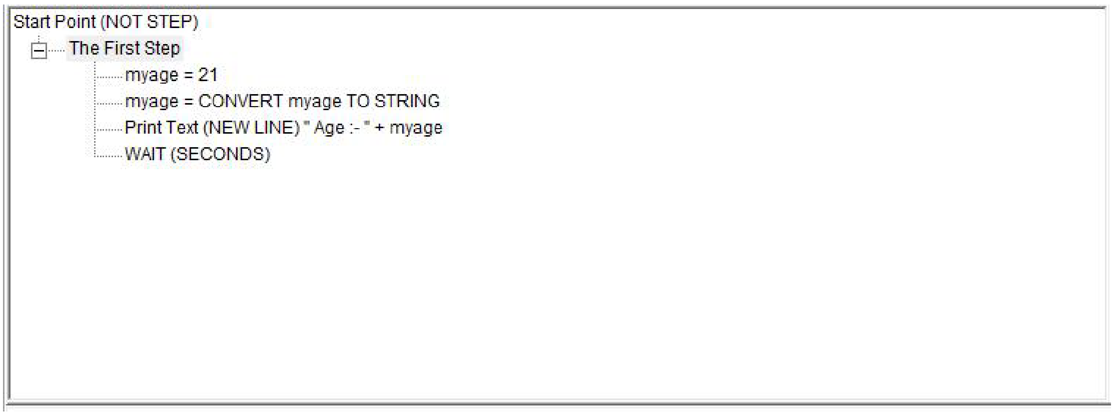
Text "Text Here"

☐ Get input (At Row and Column)

ROW 3 COL 3

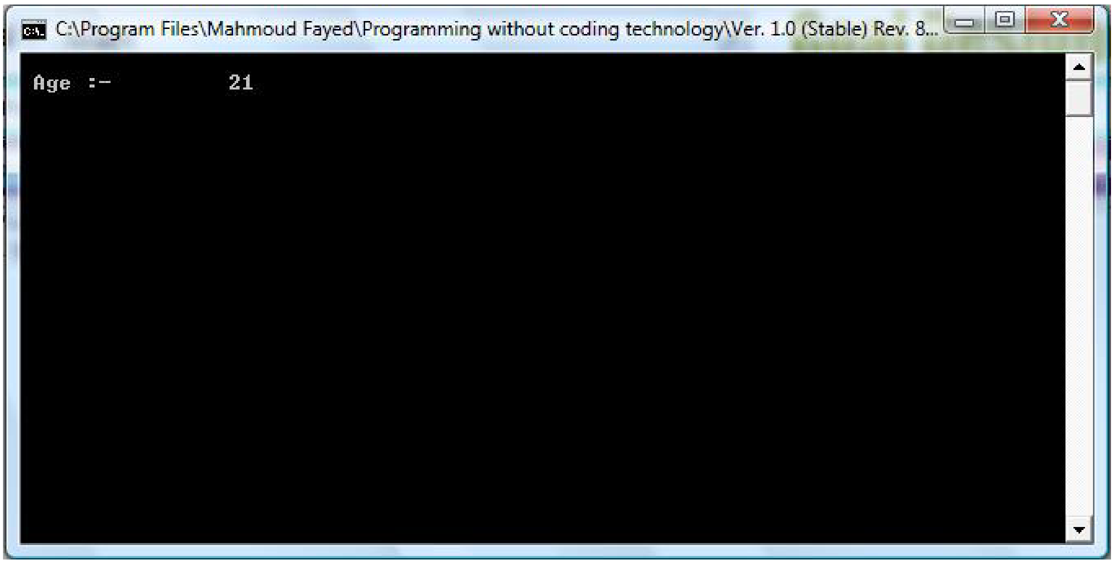
Variable

Interaction Page



```
Start Point (NOT STEP)
  The First Step
      myage = 21
      myage = CONVERT myage TO STRING
      Print Text (NEW LINE) " Age :- " + myage
      WAIT (SECONDS)
```

Final Steps Tree



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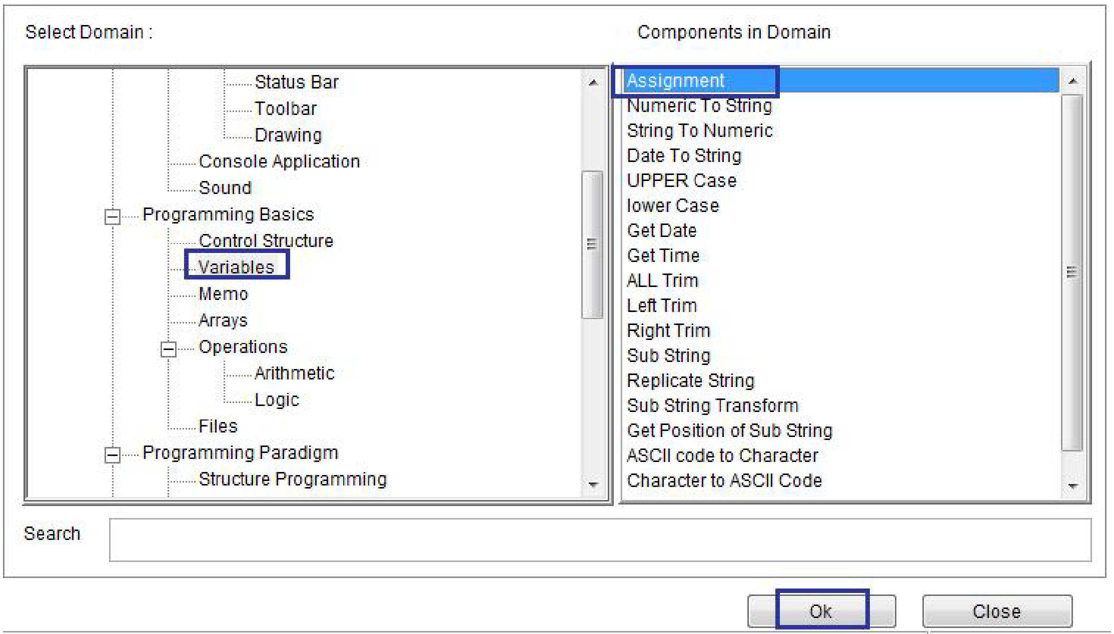
```
Age :-          21
```

The final application

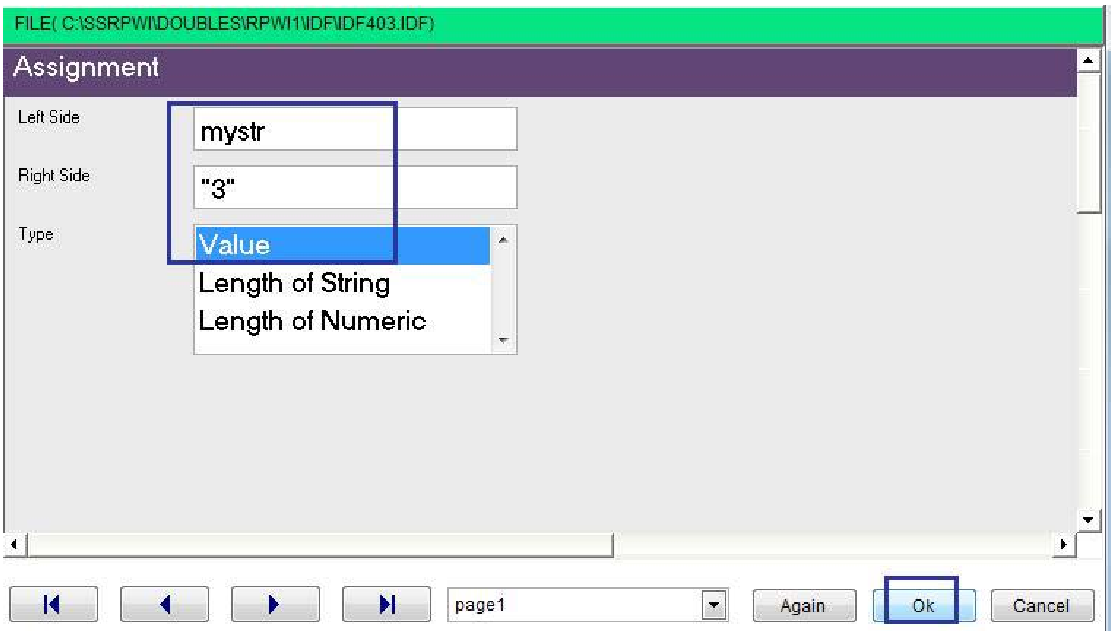
String to Numeric

- Domain (Variables)
- Component (String to Numeric)

Example - Screen shots:-



Domain (Variables) – Component (Assignment)

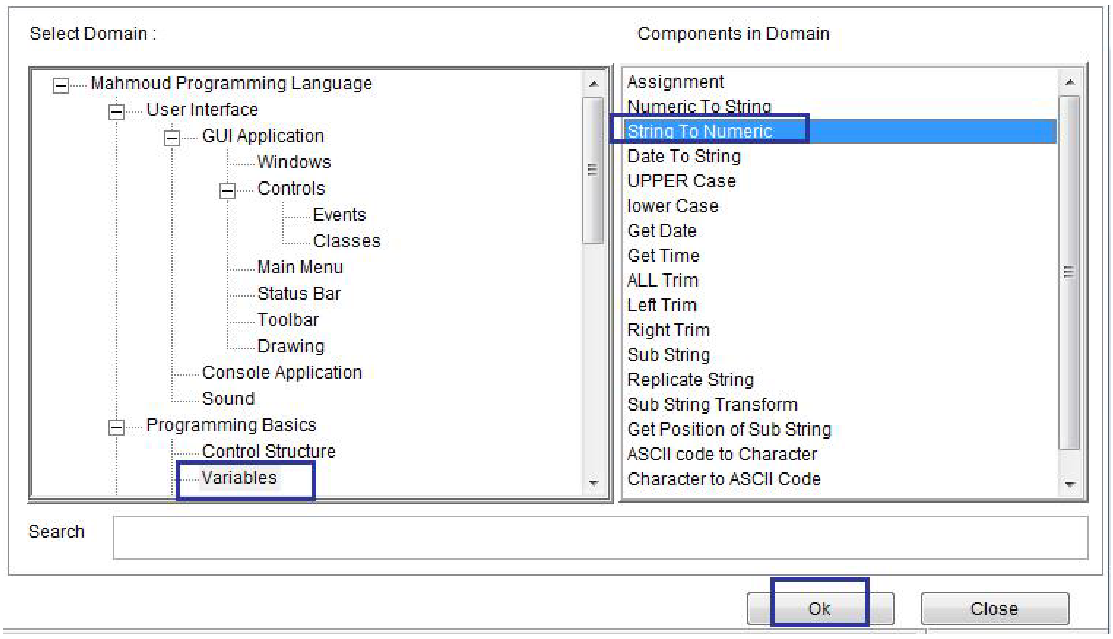


Left Side: mystr

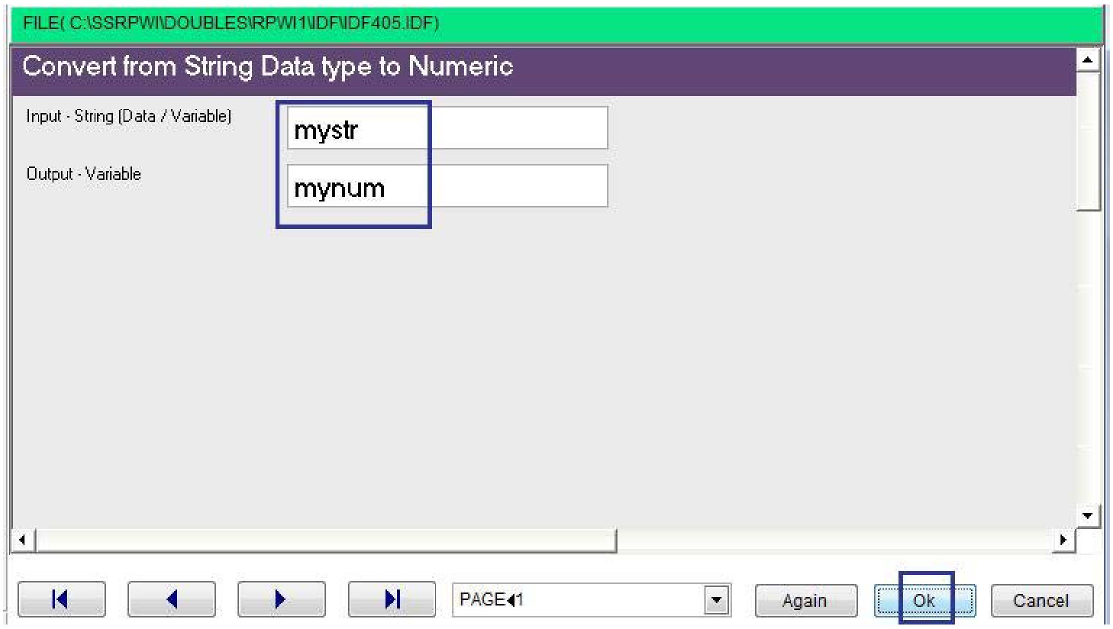
Right Side: "3"

Type: Value

Interaction Page



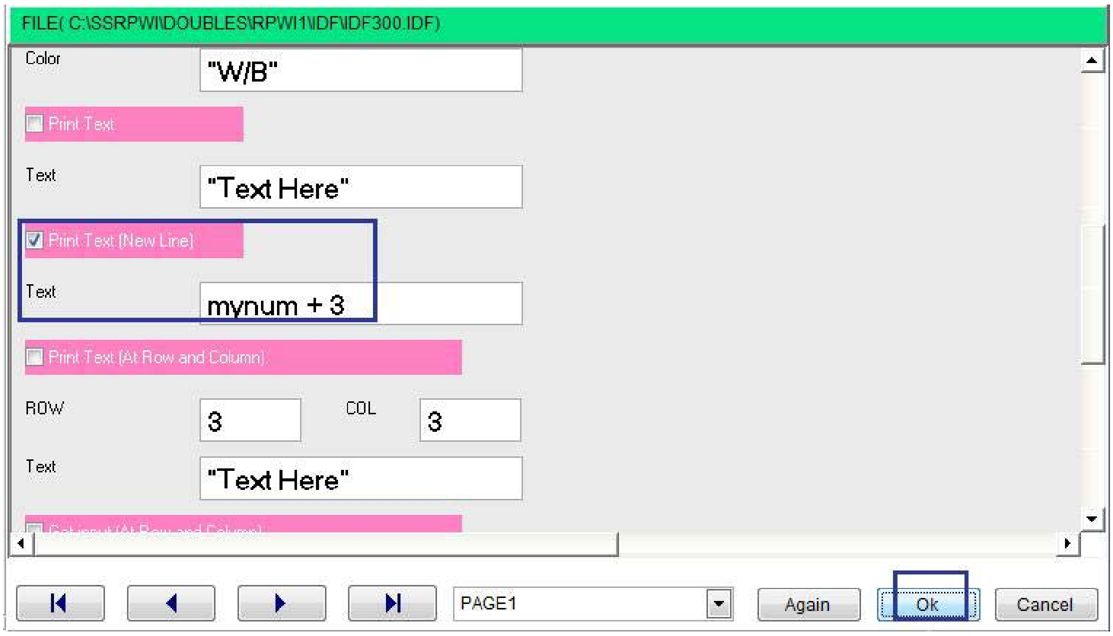
Domain (Varibles) – Compoennt (String to Numeric)


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF405.IDF)
Convert from String Data type to Numeric
PAGE◀1
Again
Ok
Cancel

Input - String (Data / Variable) mystr

Output - Variable mynum

Interaction Page


FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF300.IDF)

Color "W/B"

☐ Print Text

Text "Text Here"

☑ Print Text (New Line)

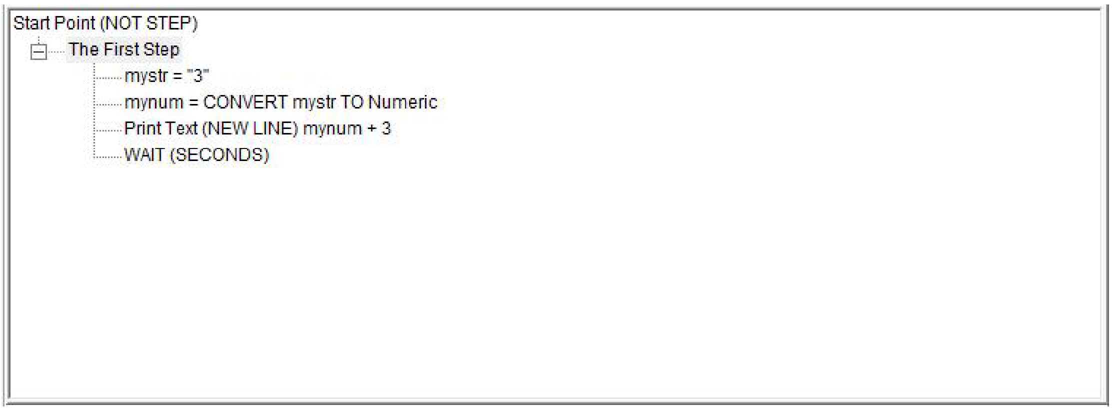
Text mynum + 3

☐ Print Text (At Row and Column)

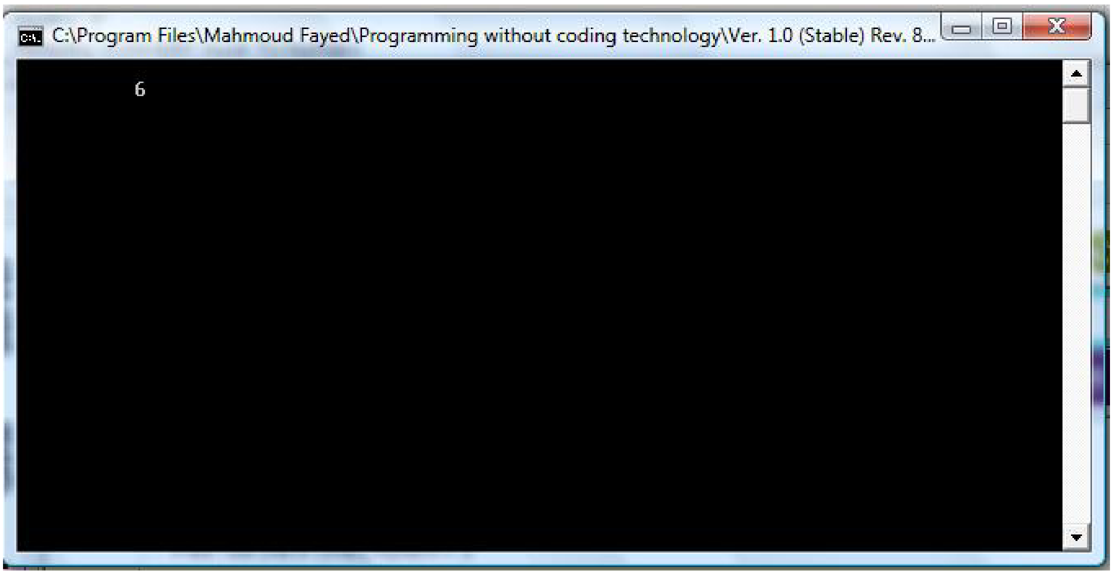
ROW 3 COL 3

Text "Text Here"

Interaction Page


```
Start Point (NOT STEP)
  The First Step
      mystr = "3"
      mynum = CONVERT mystr TO Numeric
      Print Text (NEW LINE) mynum + 3
      WAIT (SECONDS)
```

Final Steps Tree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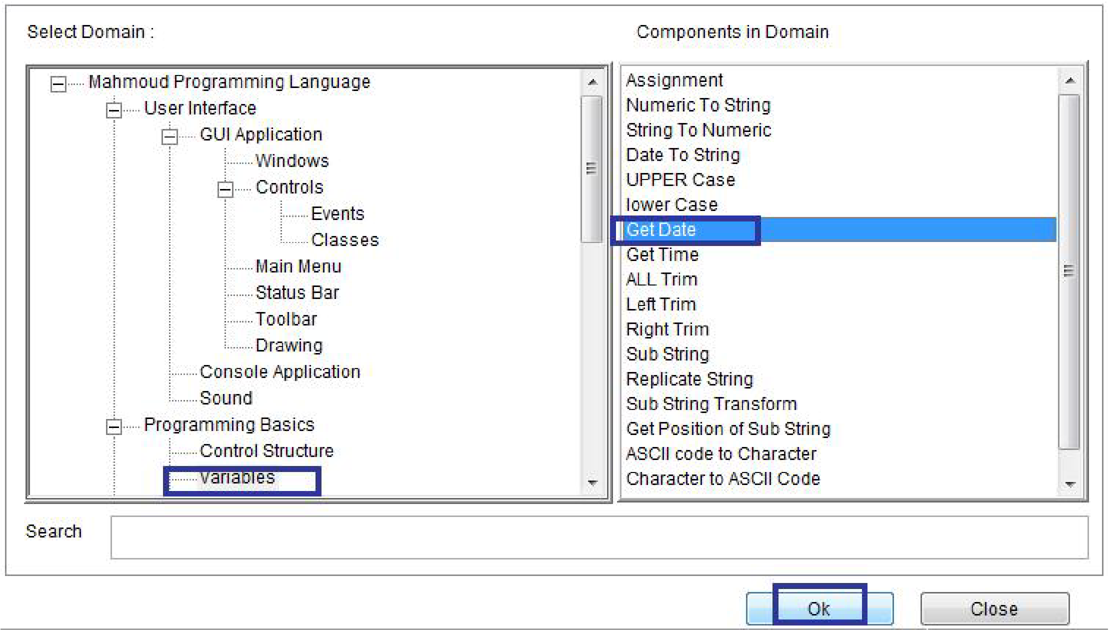
```
        6
```

The final steps

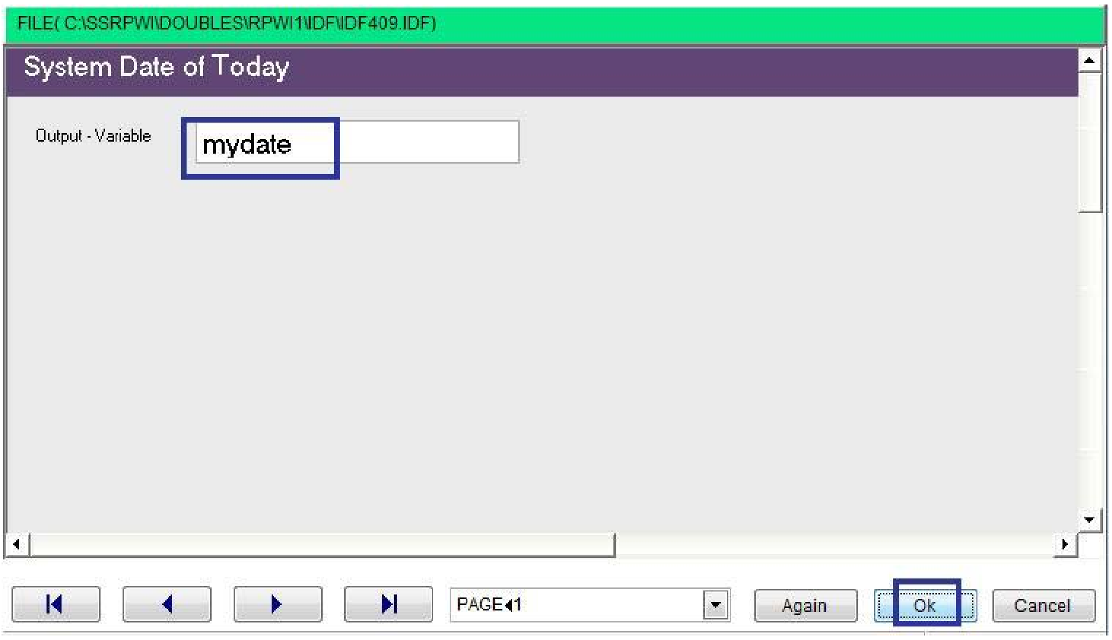
Date to String

- Domain (Variables)
- Component (Date to String)

Example - Screen shots:-



Domain (Variables) – Component (Get Date)



FILE(C:\SSRPWI\DOUBLES\RPWI1\IDF\IDF409.IDF)

System Date of Today

Output - Variable: mydate

Interaction Page