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Introduction

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Variables

types of variables

name	Lazarus data_type	range	content	example
Integer	integer	-2.147.483.648 to 2.147.483.647	whole numbers	int1 := 10;
Float	real	1.5E-45 to 3.4E38	decimal numbers	Float1 := 1.23;
Double	double	5.0E-324 to 1.7E308	scientific numbers	Double1 := 1.23456;
String	string	text	text	String1 := 'Test';
Char	char	single symbol	single symbol	Char1 := 'c';
Boolean	boolean	True, False	True, False	Bool1 := True;

More datatypes can be found at https://wiki.lazarus.freepascal.org/Data_type.

define variables

Variables can be defined in general by:

```
var
  name_of_variable:data_type;
```

```
//a more specific example:
```

```
var
  Int1, Int2, Int3:integer;
  float1, float2, float3:real;
  string1, string2 :string;
```

If you dont know which datatype to use look at [types of variables](#).

use variables

assign values:

```
name_of_variable:=value;
```

```
//a more specific example:
```

```
Int1:= 1234;
Float1:= 12.3456;
```

Buttons

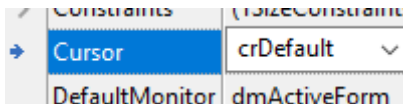
button interaction

```
procedure TForm.Button1Click(Sender: TObject);  
begin  
    //commands executed by clicking on button  
end;
```

change cursor on hover

Go to properties tab on the left side.

Search for Cursor property. Select the cursor you want.



TEdit

grab content of TEdit

Use `strtoint()` or `strtofloat()` to convert the string of a TEdit to an integer or a float.

```
name_of_variable:=strtoint(edit1.text); // convert string of Edit1 to int  
name_of_variable:=strtofloat(edit1.text); // convert string of Edit1 to float
```

display results in TEdit

Use `inttostr()` or `floattostr()` to convert the string of a TEdit to an integer or a float.

```
Edit1.Text:=inttostr(name_of_variable);  
// convert int to string and insert it into Edit1  
  
Edit1.Text:=floattostr(name_of_variable);  
// convert float to string and insert it into Edit1  
  
Edit1.Text:=floattostrF(d, ffFixed, 10,2);  
// convert float to string and display exactly two decimal points
```

DIV and MOD

How to use DIV

Use DIV to divide two numbers with each other.

```
result:=number1 DIV number2;  
// divide number1 by number2
```

```
result:=9 DIV 4;  
// result would be 2 because you can divide 9 by 4 and get 2 with decimal points  
// DIV only outputs whole numbers (int)
```

How to use MOD

MOD is kind of the opposite of DIV.

```
result:=number1 MOD number2;  
// divide number1 by number2 and multiply with number 2 and subtract the result  
from number1  
// MOD gives you the part of the number that is left
```

Using the example from DIV that means:

```
result:=9 MOD 4;  
// result would be 1 because  $9/4$  is 2 and  $2*4=8$  and  $9-8$  is 1
```

IF and THEN

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