

Last lesson was about the ' **while, do** ' condition statement. As promised there are others. here is one you will recognize immediately. its the '**if,then,else**' condition. This baby does a lot for you. it allows you to map out a logical sequence of things to check and if its true, then your program does one thing, or if its not true then it does something else.

You can 'nest' conditions within conditions. Here is an example:

```
if this is true then  
(here is where you describe what to do if true)  
else  
(here is what you describe what to do if it is not true)
```

As you can see this only allows for two possibilities. It is either true or it is false.....but maybe there are several possible false answers that you want to allow for in your program where each false answer gets treated differently. The **if,then,else** conditon allows for that. It would look like this:

```
if x = 30 then  
(do this)  
else if x <30 then  
(do this)  
else  
(do this)
```

As you can see there are 3 possible answers allowed for with different

treatment for each. x can be equal to, greater than 30....or less than 30.

I used numbers with 3 possible answers as an example but '**if,then,else**' can be used for any condition and any number of possible answers.

Below is an example of the **if,then,else** statements.

```
PROGRAM if_then_else;      { module will generate a random number then request the user to guess it}

USES MemTypes,QuickDraw,OSIntf,ToolIntf,PackIntf;

var
number, guess:integer;

begin
  number:= random mod 5; {this mod 5 generates a random number between 1 and 5}
  writeln ('I am thinking of a number');
  writeln ('The number is between 1 and 5');
  writeln;
  writeln ('What is it?');
  readln (guess);
  if guess = number then
    writeln ('Fantastic!')
  else if guess < number then
    writeln ('Sorry you were too low. It was ', number)
  else
    writeln ('Sorry you were too high. It was ', number);
  readln;
end.
```

This program returns a result that looks like this.

```

GUESSTHENUMBER
I am thinking of a number
The number is between 1 and 5

What is it?
5
Sorry you were too high. It was 2
-

```

Read the program and identify for yourself what each line does. Copy and modify it. Experiment. A couple more of these statements and you are well on your way. There is one more statement similar to if, then, else. That is the case _____ of statement. The next lesson will cover it. After that, you graduate to 2nd grade. 2nd graders get to draw pictures and do graphics. Hope you are enjoying this.

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