Chapter 6 - Conditional Expressions

Sometimes we want to play pubG on our phone if the day is Sunday.
Sometimes we order Icecream online if the day is sunny.
Sometimes we go hiking if our parents allow.

All these are decisions which depends on a condition being met.
In Python programming too, we must be able to execute instructions on a condition(s) being met. This is what conditionals are for!

If else and elif in Python
If else and elif statements are a multiway decision taken by our program due to certain conditions in our code.

Syntax:

```
            if (condition 1):          => if condition 1 is true
Indentation ←    print ("yes")
            elif (condition 2):        => if condition 2 is true
                print ("No")
            else:                      => otherwise
                print ("Maybe")
```

Code example:

```
a = 22
if (a > 9):
    print ("Greater")
else:
    print ("lesser")
```

Quick Quiz : Write a program to print yes when the age entered by the user is greater than or equal to 18.

Relational Operators

Relational operators are used to evaluate conditions inside the if statements. Some examples of relational operators are :

$$== \rightarrow \text{equals}$$
$$>= \rightarrow \text{greater than/equal to}$$
$$<= , \text{etc.}$$

Logical operators

In python logical operators operate on conditional statements. Example :

and → true if both operands are true else false
or → true if at least one operand is true else false
not → inverts true to false & false to true

elif clause

elif in python means [else if]. An if statement can be chained together with a lot of these elif statements followed by an else statement

```
if (Condition1):
      # Code
elif (Condition 2):
      # Code
elif (Condition 3):
      # Code
   :
else:
   # Code
```

⇒ This ladder will stop once a condition in an if or elif is met.

Important notes:
1. There can be any number of elif statements.
2. last else is executed only if all the conditions inside elifs fail.