Chapter 6 - Practice Set

1. Write a program to find greatest of four numbers entered by the user.

2. Write a program to find out whether a student is pass or fail, if it requires total 40% and at least 33% in each subject to pass. Assume 3 subjects and take marks as an input from the user.

3. A spam comment is definded as a text containing following keywords:
"make a lot of money", "buy now", "subscribe this", "click this". Write a program to detect these spams.

4. Write a program to find whether a given username contains less than 10 characters or not.

5. Write a program which finds out whether a given name is present in a list or not.

6. Write a program to calculate the grade of a student from his marks from the following scheme:

90 - 100	→	Ex
80 - 90	→	A
70 - 80	→	B
60 - 70	→	C
50 - 60	-	D
< 50	-	F

7. Write a program to find out whether a given post is talking about "Harry" or not.

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 :

```
==        → equals
>=        → greater than/equal to
<= , 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):              ⇒ This ladder will stop once a
      # Code                        Condition in an if or elif
elif (Condition 3):                 is met.
      # Code
   :
else :
   # Code
```

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