# Problems

# on

# Conditional statements

**# Nested If Statement in Python**

**"""**

**3 Marks as Input**

**Total**

**Average**

**Result**

**If Pass Grade**

**90-100 A**

**80-89 B**

**70-79 C**

**Else D**

Output

```
Enter Mark-1  : 90
Enter Mark-2  : 90
Enter Mark-3  : 90
Total  :  270
Average  :  90.0
Result  : Pass
Grade : A
```

## Solution

```
m1 = int(input("Enter Mark-1  : "))
m2 = int(input("Enter Mark-2  : "))
m3 = int(input("Enter Mark-3  : "))
total = m1 + m2 + m3
average = total / 3.0
print("Total   : ", total)
print("Average  : ", average)
if m1 >= 35 and m2 >= 35 and m3 >= 35:
    print("Result  : Pass")
    if average >= 90 and average <= 100:
        print("Grade : A")
    elif average >= 80 and average <= 89:
        print("Grade : B")
    elif average >= 70 and average <= 79:
        print("Grade : C")
    else:
        print("Grade : D")
else:
    print("Result  : Fail")
    print("Grade   : No Grade")
```

**Q2. Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria :**

| Cost price (in Rs) | Tax |
|---|---|
| > 100000 | 15 % |
| > 50000 and <= 100000 | 10% |
| <= 50000 | 5% |

3 **Write a program to find the largest number out of three numbers excepted from user.**

4 **Write a program to check a character is vowel or not.**

5. **A company decided to give bonus to employee according to following criteria:**

| Time period of Service | Bonus |
|---|---|
| More than 10 years | 10% |
| >=6 and <=10 | 8% |
| Less than 6 years | 5% |

**Ask user for their salary and years of service and print the net bonus amount.**

6. **Accept three sides of a triangle and check whether it is an equilateral, isosceles or scalene triangle.**

**Note :**

**An equilateral triangle is a triangle in which all three sides are equal.**

**A scalene triangle is a triangle that has three unequal sides.**

**An isosceles triangle is a triangle with (at least) two equal sides.**

## Q.3. Solution

```
Ans.

num1 = int(input("Enter first number"))
num2 = int(input("Enter second number"))
num3 = int(input("Enter third number"))
if num1 > num2 and num1 > num3:
     print("Greatest number is ", num1)
if num2 > num1 and num2 > num3:
     print("Greatest number is ", num2)
if num3 > num2 and num3 > num1:
    print("Greatest number is ", num3)
```

## Q.2. Solution

```
Ans.
tax = 0
pr=int(input("Enter the price of bike"))
if pr > 100000:
    tax = 15/100*pr
elif pr >50000 and pr <=100000:
    tax = 10/100*pr
else:
    tax = 5/100*pr
print("Tax to be paid ",tax)
```

Q.4. Solution

```
Ans.

ch=input("Enter any character")
vow="aeiouAEIOU"
if ch in vow:
    print("Entered character is vowel")
else:
    print("Entered character is not vowel")
```

Q.6. Solution

```
Ans.

s1=int(input("Enter first side of triangle"))
s2=int(input("Enter second side of triangle"))
s3=int(input("Enter third side of triangle"))
if s1==s2 and s2 == s3:
    print("Equilateral triangle")
if (s1==s2 and s2!=s3) or (s2==s3 and s2!=s1) or (s1==s3 and s1!=s2):
    print("Isosceles Triangle")
if s1!=s2 and s1!=s3 and s2!=s3:
    print("Scalene Triangle")
```

Q 5. Solution

**Ans.**

```
ser=int(input("Enter the time period of service"))
sal =int(input("Enter your salary"))
if ser > 10:
    b=10/100*sal
if ser >=6 and ser <=10:
    b = 8/100*sal
if ser < 6:
   b = 5/100*sal
print("Bonus is ", b)
```

Please use **elif** for remaining conditions for 3rd, 5th and 6th questions