Assignment No.03

Q.1#WAP to check if the given number is positive or negative

```
num=int(input("Enter number:"))

if(num>0):
   print(f'{num} is positive.')
else:
   print(f'{num} is negative.')
```

Q.2.#WAP to input any alphabet and check whether it is vowel or consonant

```
alpha=str(input("Enter alphabet:"))

if alpha in('a','e','i','o','u'):
   print("alphabet is vowel")
else:
   print("alphabet is consonant")
```

Q.3#WAP to input angles of a triangle and check whether triangle is valid or not

```
a1=int(input("Enter angle 1:"))
a2=int(input("Enter angle 2:"))
a3=int(input("Enter angle 3:"))
if(a1+a2+a3==180):
   print("Triangle is valid")
else:
   print("Triangle is not valid")
```

Q.4#WAP to input all sides of a triangle and check whether triangle is valid or not.

```
s1=int(input("Enter side 1 of triangle:"))
s2=int(input("Enter side 2 of triangle:"))
s3=int(input("Enter side 3 of triangle:"))
if(s1+s2>s3 and s1+s3>s2 and s2+s3>s1):
   print("Triangle is valid")
else:
   print("Triangle is not valid")
```

Q.5# wap to check whether the triangle is equilateral ,isosceles or scalene triangle

```
s1=int(input("Side s1:"))
s2=int(input("Side s2:"))
```

```
s3=int(input("Side s3:"))
if(s1==s2==s3):#All sides are equal.
    print("Triangle is Equilateral triangle.")
elif(s1==s2 or s2==s3 or s3==s1):#At least two sides are equal
    print("Triangle is Isosceles triangle.")
else:#All sides are different
    print("Triangle is Scalene triangle.")
```

Q.6#WAP to calculate profit or loss

```
selling_price=int(input("Enter selling price:"))
cost_price=int(input("Enter cost price:"))
if(selling_price>cost_price):
    profit=selling_price-cost_price
    print(f'profit is:{profit}')
elif(cost_price>selling_price):
    loss=cost_price-selling_price
    print(f'loss is:{loss}')
else:
    print("Invalid input")
```

Q.7#WAP to check if user has entered correct userid and password.

```
user_id=12456
password='pragati'
id=input("Enter id:")
correct_pass=str(input("Enetr password:"))
if(user_id==id or password==correct_pass):
    print("correct user-id and password.")
else:
    print("Invalid input.")
```

Q.8.#write a program to prompt user to enter userid and password. After verifying userid and password display a 4 digit random number and ask user to enter the same.If user enters the same number then show him success message otherwise failed

```
import random

user_id=2811
password='pragati'
id=input("Enter id:")
```

```
correct_pass=str(input("Enter password:"))
if(user_id==id or password==correct_pass):
   print("correct user-id and password.")

   captcha=random.randint(1111,9999)
   print(captcha)

   user_captcha=int(input("Enter the captcha shown above:"))
   if(user_captcha== chr(captcha)):
      print("Login Successful.")
   else:
      print("Captcha verification failed")
else:
   print("Invalid input.")
```

Q.9.#WAP Input 5 subject marks from user and display grade(First class,Second class,....)

```
m1=int(input("Enter marks of sub m1:"))
m2=int(input("Enter marks of sub m2:"))
m3=int(input("Enter marks of sub m3:"))
m4=int(input("Enter marks of sub m4:"))
m5=int(input("Enter marks of sub m5:"))
total_marks=m1+m2+m3+m4+m5
percentage=(total_marks/500)*100
if(percentage>=90 and percentage<=100):
   print("Student got first class.")
elif(percentage>=80 and percentage<=90):
   print("Student got second class.")
elif(percentage>=70 and percentage<=80):
   print("Student got third class:")
elif(percentage>=60 and percentage<=70):
   print("Student got fourth class:")
elif(percentage>=50 and percentage<=60):
   print("Student got fifth class:")
else:
   print("student fail")
```

Q.10.#WAP to check if person is eligible to marry or not(male age>=21) and (female age>=18)

```
age=int(input("Enter person age:"))
```

```
gender=str(input("Enter gender male/female:"))
if(gender=='male'):
   if(age>=24):
      print("Male is eligible to marry.")
   else:
      print("Male is not eligible to marry.")
else:
   if(age>=18):
      print("Female is eligible to marry.")
   else:
      print("Female is not eligible to marry.")
```

Q.11.#WAP accepts age of five peoples and also per person ticket amount and then calculate total amount to ticket to travel for all of them based on following condition

#a.Children below 12=30%discount

#b.senior citizen(above 59)=50% discount

#c.others need to pay full

```
a1=int(input("Enter age of person 1:"))
t1=int(input("Enter ticket amount of person 1:"))
if(a1<12):
   t1=t1-(t1*0.3)
elif(a1>59):
   t1=t1-(t1*0.5)

a2=int(input("Enter age of person 2:"))
t2=int(input("Enter ticket amount of person 2:"))
if(a2<12):
   t2=t2-(t2*0.3)
elif(a2>59):
   t2=t2-(t2*0.5)

a3=int(input("Enter age of person 3:"))
t3=int(input("Enter ticket amount of person 3:"))
if(a3<12):
   t3=t3-(t3*0.3)
elif(a3>59):
   t3=t3-(t3*0.5)
```

```
a4=int(input("Enter age of person 4:"))
t4=int(input("Enter ticket amount of person 4:"))
if(a4<12):
    t4=t4-(t4*0.3)
elif(a4>59):
    t4=t4-(t4*0.5)

a5=int(input("Enter age of person 5:"))
t5=int(input("Enter ticket amount of person 5:"))
if(a5<12):
    t5=t5-(t5*0.3)
elif(a5>59):
    t5=t5-(t5*0.5)

total_bill=t1+t2+t3+t4+t5
print("Total bill:",total_bill)
```

Q.12.#WAP to check if given 3 digit number is a palindrome or not

```
num=int(input("Enter three digit number:"))
if(num>=100 and num<=999):
    h=num//100
    t=num//10
    o=num%10

    if(h==o):
        print(f'{num} is palindrome.')
```

Q.13.#WAP to input electricity unit charges and calculate total electricity bill according to the given condition

```
#for first 50 units Rs.0.50/unit
#for next 100 units Rs.0.75/unit
#for next 100 units Rs.1.20/unit
#for unit above 250 Rs.1.50/unit
#An additional surcharge of 20% is added to the bill
unit=int(input("Enter number of units:"))
total=0
if(unit<=50):
    total=unit*0.50
```

```
else:
    if(unit>50 and unit<=150):
        total=(50*0.50)+((unit-50)*0.75)
    else:
        if(unit>150 and unit<=250):
            total=(50*0.50)+(100*0.75)+((unit-150)*1.20)
        else:
            total=(50*0.50)+(100*0.75)+(100*1.20)+((unit-250)*1.50)
surcharge=(total*0.20)
total=total+surcharge
print(f'Total electricity bill={total}')
```