Assignment 2 - 03/09/2025

1.Write a Python program that takes the length and width of arectangle from the user and prints its area.

```
length = float(input("Enter the length of the rectangle:
")) width = float(input("Enter the width of the
rectangle: ")) area = length * width
print(f"area of rectangle = {area}")
```

2.Write a program that asks the user for the side of a square andprints its perimeter.

```
side = float(input("enter the side length of square:" ))
perimeter = 4 * side
print(f"perimeter_of_square = {perimeter}")
```

3.Take the base and height of a triangle as input and print itsarea.

```
a = float(input("enter height of triangle:"))
b = float(input("enter base of triangle:"))
area = a*b/2
print(f"area of triangle = {area}")
```

4.Write a program that asks the user for the radius of a circle andprint circumference. (Use 3.14 for π).

```
r = float(input("enter radius of circle:"))
circumference = 3.142 * r * 2
print(f"circumference of circle = {circumference}")
```

5.Take Principal (P), Rate (R), and Time (T) as input from the userand print the Simple Interest.

```
p = float(input("enter a principal:"))
r = float(input("enter a rate:")) t =
float(input("enter a time:")) i =
p*r*t/100
print(f"simple interest = {i}")
```

6.Percentage Result Evaluation

```
per = float(input("enter your
percentage:")) if(per>=85 and per<=100):
print("distinction") elif(per>=60 and
per<=84):    print("first class")
elif(per>=50 and per<=59):
```

```
print("second class") elif(per>=35 and
per<=49):
    print("pass") elif(per>=0
and per<=34):
    print("fail") else:
print("invalid output")
```

7.Check Even or Odd

```
n = int(input("enter the value:"))
if (n % 2 == 0):      print("even")
else:     print("odd")
```

8.Check Positive, Negative, or Zero

```
n = int(input("enter the value:"))
if(n > 0):
    print("positive number") elif(n
< 0):
    print("negative number")
else:      print("zero")
```

Assignment 3

1. E-commerce Discount Calculator

```
pa = int(input("enter the purchase
amount:$")) if pa >= 100 and pa < 500:
discount = 0.10 * pa elif pa >= 500:
    discount = 0.20 * pa else:
    discount = 0 fa =
pa - discount
print(f"purchase amount = {pa}\ndiscount amount = {discount}\nfinal amount
= {fa}")
```

2. Traffic Light Simulation

```
c = str(input("enter the colour:"))
if(c == "Red"):      print("stop")
elif(c == "Yellow"):
    print("Ready to move")
elif(c == "Green"):
print("Go") else:
print("invalid colour")
```

3. Grade Evaluation System

```
marks = float(input("enter your marks:"))
if(marks>=90 and marks <=100):
    print("Grade A") elif(marks<90
and marks >=75):
```

```
    print("Grade B") elif(marks<75
and marks>=50):
    print("Grade C") elif(marks<50
and marks>=0):
    print("Fail") else:
    print("invalid input")
```

4. Odd or Even and Divisibility Check

```
n = int(input("enter your number:"))
if(n%2==0):
    print("n is even number") else:
    print("n is an odd number")
if(n%5==0):
    print("n is divisible by 5")
else:    print("n is not divisible
by 5")
```

5. Password Strength Checker

```
password = input("enter your password:")
length = len(password) if(length>=8):
    print("password is strong")
elif(length >=5 and length < 8):
print("password is medium") else:
print("password is weak")
```

Assignment 4

1. Grading System

```
marks = int(input("enter your marks:"))
if(marks >=0 and marks <=100):
if(marks>=90):        print("Grade A")
elif(marks>=75):        print("Grade
B")     elif(marks>=50):
print("Grade C")      else:
        print("Fail") else:
print("invalid input")
```

2. ATM Withdrawal Check

```
balance = float(input("enter your balance:"))
withdraw = float(input("enter amount to
withdraw:")) if(balance>=withdraw):
if(withdraw%100==0):
        print("transaction is successful")
else:
        print("enter amount in multiples of
100") else:    print("Insufficient balance")
```

3. Triangle Type Checker

```
a = int(input("enter a triangle side a:"))
b = int(input("enter a triangle side b:"))
c = int(input("enter a triangle side c:"))
if(a+b > c and b+c > a and a+c > b):
    if(a==b==c):
        print("Equilateral")
elif(a==b or b==c or c==a):
print("Isosceles")      else:
        print("Scalene")
else:    print("Not a
Triangle")
```

4. Voting Eligibility

```
age = float(input("enter your age:")) citizen
= str(input("enter your citizenship:"))
if(age>=18):     if(citizen == "Indian"):
print("eligible to vote")     else:
        print("Not eligible (Non-
citizen)") else:    print("Not eligible
(Underage)")
```

5. Discount Calculator

```
bill = int(input("Enter the bill amount:
")) if bill >= 5000:     if bill >= 10000:
dis = bill * 0.20        tb = bill - dis
print("20% discount")     else:
        dis = bill * 0.10          tb =
bill - dis        print("10% discount")
elif bill >= 2000:     dis = bill * 0.05
tb = bill - dis     print("5% discount")
else:     dis = 0     tb = bill
print("No discount") print(f"Discount
amount: {dis}") print(f"Total bill after
discount: {tb}")
```