Program 1 :

```
class person:
    name="Wahidullah"
    gender="male"
    age=25
    def person_info(self):
       print(f'I am {p.name},{p.age}years old and i am {self.gender}')
p=person()
print(p.name)
p.person_info()
```

Output:

Wahidullah

I am Wahidullah,25years old and i am male

Program 2 :

```
class Person:
    name = "Md. Wahid Ullah"
    sex = "male"
    age = 25

    def person_info(self):
        print(f'I am {self.name}, {self.age} years old and I am {self.sex}')

p = Person()
print(p.name)
p.person_info()
```

Output:

Md. Wahid Ullah

I am Md. Wahid Ullah, 25 years old and I am male

Program 3 :

```
class Box:
    def __init__(self, w, h, d):
        self.width = w
```

```
        self.height = h
        self.depth = d

    def box_volume(self):
        return self.width * self.height * self.depth

mybox1 = Box(10, 10, 10)
mybox2 = Box(20, 20, 20)
mybox3 = Box(30, 30, 30)

print("The volume of box1 is:", mybox1.box_volume())
print("The volume of box2 is:", mybox2.box_volume())
print("The volume of box3 is:", mybox3.box_volume())
```

Output:

The volume of box1 is: 1000

The volume of box2 is: 8000

The volume of box3 is: 27000

Program 4 :

```
class Student:
    def __init__(self, r, n, g):
        self.roll = r
        self.name = n
        self.gpa = g

    def student_info(self):
        print(f'I am {self.name}, my roll and gpa are {self.roll} and
{self.gpa}')

T = Student(10, 'Wahid', 3.5)
S = Student(20, 'Utsab', 3.6)
J = Student(30, 'Foysal', 3.3)

T.student_info()
S.student_info()
J.student_info()
```

output:

I am Wahid, my roll and gpa are 10 and 3.5

I am Utsab, my roll and gpa are 20 and 3.6

I am Foysal, my roll and gpa are 30 and 3.3

Program 5 :

```
class Student:
    def __init__(self, r, n, g):
        self.roll = r
        self.name = n
        self.gpa = g

    def student_info(self):
        print(f'I am {self.name}, my roll and gpa are {self.roll} and
{self.gpa}')

T = Student(10, 'Wahid', 3.5)
S = Student(20, 'Utsab', 3.6)
J = Student(30, 'Foysal', 3.3)

T.student_info()
S.student_info()
J.student_info()

T.address = 'Chattogram'
print(f'I am {T.name}, my roll and gpa are {T.roll} and {T.gpa}, also address
is: {T.address}')
```

Output:

I am Wahid, my roll and gpa are 10 and 3.5

I am Utsab, my roll and gpa are 20 and 3.6

I am Foysal, my roll and gpa are 30 and 3.3

I am Wahid, my roll and gpa are 10 and 3.5, also address is: Chattogram

Program 6 :

```
class Car:
    name = "Premio"
    color = "Red"

    def start(self):  # Add self parameter
        print("Starting the engine")


print("Name of the car:", Car.name)
print("Color:", Car.color)

car_instance = Car()
car_instance.start()  # Call the start method on an instance of Car
```

Output:

Name of the car: Premio

Color: Red

Starting the engine

Program 7 :

```
class Calculation:
    def __init__(self, a, b):
        print("Addition:", a + b)
        print("Subtraction:", a - b)
        print("Multiplication:", a * b)
        print("Division:", a / b)

cal = Calculation(35, 25)
```

output:

Addition: 60

Subtraction: 10

Multiplication: 875

Division: 1.4

Program 8 :

```
import math

class QuadraticEq:
    def __init__(self, a, b, c):
        d = (b**2) - (4*a*c)
        if d < 0:
            print("Roots are imaginary")
        else:
            x1 = (-b + math.sqrt(d)) / (2 * a)
            x2 = (-b - math.sqrt(d)) / (2 * a)
            print("X1=%.2f" % x1, "X2=%.2f" % x2)
            print("Roots are Real")

a = int(input("A="))
b = int(input("B="))
c = int(input("C="))

qrdeq = QuadraticEq(a, b, c)
```

Output:

A=12

B=23

C=2

X1=-0.09 X2=-1.83

Roots are Real

Program 9 :

```
import math

class TriangleArea:
    def __init__(self, a, b, c):
        if (a + b) > c and (b + c) > a and (a + c) > b:
            s = (a + b + c) / 2
            area = math.sqrt(s * (s - a) * (s - b) * (s - c))
            print("Triangle Area =", area)
        else:
            print("Triangle is not possible")

a = float(input("Enter First Arm = "))
b = float(input("Enter Second Arm = "))
c = float(input("Enter Third Arm = "))

tarea = TriangleArea(a, b, c)
```

Output:

Enter First Arm = 6

Enter Second Arm = 3

Enter Third Arm = 5

Triangle Area = 7.483314773547883

Program 10:

```
class Max3Num:
    def __init__(self, a, b, c):
        if a > b and a > c:
            print("A is maximum:", a)
        elif b > c:
            print("B is maximum:", b)
        else:
            print("C is maximum:", c)

a = int(input("A = "))
b = int(input("B = "))
c = int(input("C = "))

max3num = Max3Num(a, b, c)
```

Output:

A = 55

B = 98

C = 36

B is maximum: 98