# # Calculator Program

class inp():

def init (self, a, b):

self.a = a

self.b = b class cal(inp):

def add(self):

return self.a + self.b def sub(self):

return self.a - self.b def mul(self):

return self.a \* self.b def div(self):

return self.a / self.b c = 1

while c != 0:

print("Select an Option") print("0. Exit")

print("1. Addition") print("2. Subtraction") print("3. Multiplication") print("4. Division")

print("5. Default: a=6, b=2")

c = int(input("Enter a choice: ")) if c == 1:

a = float(input("Enter the first number: "))

b = float(input("Enter the second number: ")) x = cal(a, b)

# # Calculator Program

class inp():

def init (self, a, b): self.a = a

self.b = b class cal(inp):

def add(self):

return self.a + self.b def sub(self):

return self.a - self.b def mul(self):

return self.a \* self.b def div(self):

return self.a / self.b c = 1

while c != 0:

print("Select an Option") print("0. Exit")

print("1. Addition") print("2. Subtraction") print("3. Multiplication") print("4. Division")

print("5. Default: a=6, b=2")

c = int(input("Enter a choice: ")) if c == 1:

a = float(input("Enter the first number: "))

b = float(input("Enter the second number: ")) x = cal(a, b)

s = x.div()

print("The result of division of ", a, "&", b, "is:", s) elif c == 5:

x = cal(6, 2) p = x.add()

print("The result of addition of 6 & 2 is:", p) q = x.sub()

print("The result of subtraction of 6 & 2 is:", q) r = x.mul()

print("The result of multiplication of 6 & 2 is:", r) s = x.div()

print("The result of division of 6 & 2 is:", s)

# Output:

C:\Users\abc\venv\Scripts\python.exe C:/Users/abc/Downloads/cal1.py Select an Option

1. Exit
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Default: a=6, b=2 Enter a choice: 1

Enter the first number: 12 Enter the second number: 3

The result of addition of 12.0 & 3.0 is: 15.0 Select an Option

1. Exit
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Default: a=6, b=2 Enter a choice: 2

Enter the first number: 3 Enter the second number: 6

The result of subtraction of 3.0 & 6.0 is: -3.0 Select an Option

1. Exit
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Default: a=6, b=2 Enter a choice: 3

Enter the first number: 6

Enter the second number: 3

The result of multiplication of 6.0 & 3.0 is: 18.0 Select an Option

1. Exit
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Default: a=6, b=2 Enter a choice: 4

Enter the first number: 18 Enter the second number: 6

The result of division of 18.0 & 6.0 is: 3.0 Select an Option

1. Exit
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Default: a=6, b=2 Enter a choice: 5

The result of addition of 6 & 2 is: 8 The result of subtraction of 6 & 2 is: 4

The result of multiplication of 6 & 2 is: 12

The result of division of 6 & 2 is: 3.0 Select an Option

1. Exit
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Default: a=6, b=2 Enter a choice: 0

# # Multiple Inheritance

class Animal:

def speak(self): print("Animal Speaking")

class Dog(Animal): def bark(self):

print("Dog Barking") class DogChild(Dog):

def eat(self): print("Eating bread...")

d = DogChild() d.bark()

d.speak()

d.eat()

# Output:

Dog Barking Animal Speaking

Eating bread...

# # Polymorphism with inheritance

class Bird:

def intro(self):

print("There are many types of birds.") def flight(self):

print("Most of the birds can fly but some cannot.") class sparrow(Bird):

def flight(self): print("Sparrows can fly.")

class ostrich(Bird): def flight(self):

print("Ostriches cannot fly.") obj\_bird = Bird()

obj\_spr = sparrow() obj\_ost = ostrich() obj\_bird.intro() obj\_bird.flight() obj\_spr.intro() obj\_spr.flight() obj\_ost.intro() obj\_ost.flight() Output:

C:\Users\abc\venv\Scripts\python.exe C:/Users/abc/Downloads/polymorphism.py There are many types of birds.

Most of the birds can fly but some cannot. There are many types of birds.

Sparrows can fly.

There are many types of birds. Ostriches cannot fly.