

EXP 02 - CODE

```
ex-01.py ex-02-1.py U X
ex-02-1.py > add_numbers
1 #defining a function
2 def add_numbers(x,y):
3     return x+y
4
5 #calling a function
6 result = add_numbers(5,3)
7 print(result)
8
9 #defining a class
10 class Person:
11     def __init__(self, name, age):
12         self.name=name
13         self.age=age
14     def introduce(self):
15         return f"My Name is {self.name} and I am {self.age} years old"
16     def introduce2(self):
17         return f"My Surname is {self.name} and My Roll Number is {self.age}"
18 person1= Person("Shivansh", 20)
19 person2= Person("Mishra", 2)
20
21 print(person1.introduce())
22 print(person2.introduce2())
23
24 try:
25     result = 10/0
26 except ZeroDivisionError:
27     print("You can't divide by zero!")
28
29 try:
30     result = 10/2
31 except ZeroDivisionError:
32     print("You can't divide by zero!")
33 else:
34     print("Division Successful: ", result)
35 finally:
36     print("Execution Finished!")
37
ex-01.py ex-02-1.py ex-02-2.py U X
ex-02-2.py > ...
1 #Parent Class
2 class Animal:
3     def __init__(self, name):
4         self.name = name
5     def speak(self):
6         print(f"{self.name} makes a sound.")
7 class Dog(Animal):
8     def speak(self):
9         print(f"{self.name} barks")
10 dog = Dog("Sheru")
11 dog.speak()
12
13 class Parent : #Single Inheritance
14     def greet(self):
15         print("Hello from parent!")
16 class Child(Parent):
17     pass
18 obj = Child()
19 obj.greet()
20
21 class Parent1: #Multiple Inheritance
22     def greet(self):
23         print("hello from parent1!")
24 class Parent2:
25     def welcome(self):
26         print("Welcome from parent2!")
27 class Child(Parent1, Parent2):
28     pass
29 obj = Child()
30 obj.greet()
31 obj.welcome()
32
33 class Grandparent: #Multilevel Inheritance
34     def greet(self):
35         print("hello from Grandparent!")
36 class Parent(Grandparent):
37     pass
```

```
ex-01.py  ex-02-1.py  ex-02-2.py U X
ex-02-2.py > ...
38 class Child(Parent):
39     pass
40 obj = Child()
41 obj.greet()
42
43 class Parent:                #Hierarchial Inheritance
44     def greet(self):
45         print("Hello from Parent")
46 class Child1(Parent):
47     pass
48 class Child2(Parent):
49     pass
50
51 obj1 = Child1()
52 obj2 = Child2()
53 obj1.greet()
54 obj2.greet()
55
56 class Base:                  #Hybrid Inheritance
57     def greet(self):
58         print("hello from Base")
59 class Derived1(Base):
60     pass
61 class Derived2(Base):
62     pass
63 class Hybrid(Derived1, Derived2):
64     pass
65 obj = Hybrid()
66 obj.greet()
67
68 class Animal:                #super() method in Inheritance
69     def __init__(self, name):
70         self.name= name
71 class Dog(Animal):
72     def __init__(self, name, breed):
73         super().__init__(name)
74         self.breed=breed
75
76 dog = Dog("Sheru", "German Shefard")
77 print(dog.name)
78 print(dog.breed)
79
80 #Method Overriding
81 class Parent:
82     def greet(self):
83         print("Hello from Parent!")
84 class Child:
85     def greet(self):
86         print("hello from Child!")
87 child = Child()
88 child.greet()
```

EXP 02 - OP

```
[Running] python -u "c:\Users\sirsh\OneDrive\Desktop\PYTHON-PRACTICALS-SEM4\tempCodeRunnerFile.python"
```

8

```
My Name is Shivansh and I am 20 years old
My Surname is Mishra and My Roll Number is 2
You can't divide by zero!
Division Successful: 5.0
Execution Finished!
```

```
[Done] exited with code=0 in 0.122 seconds
```

```
[Running] python -u "c:\Users\sirsh\OneDrive\Desktop\PYTHON-PRACTICALS-SEM4\ex-02-2.py"
```

```
Sheru barks
Hello from parent!
hello from parent1!
Welcome from parent2!
hello from Grandparent!
Hello from Parent
Hello from Parent
hello from Base
Sheru
German Shefard
hello from Child!
```

```
[Done] exited with code=0 in 0.096 seconds
```