EXP 02 - CODE

ex-01.py | ex-02-1.py U

ex-02-1.py > add_numbers

```python
#defining a function
def add_numbers(x,y):
    return x+y

#calling a function
result = add_numbers(5,3)
print(result)

#defining a class
class Person:
    def __init__(self, name, age):
        self.name=name
        self.age=age
    def introduce(self):
        return f"My Name is {self.name} and I am {self.age} years old"
    def introduce2(self):
        return f"My Surname is {self.name} and My Roll Number is {self.age}"
person1= Person("Shivansh", 20)
person2= Person("Mishra", 2)

print(person1.introduce())
print(person2.introduce2())

try:
    result = 10/0
except ZeroDivisionError:
    print("You can't divide by zero!")

try:
    result = 10/2
except ZeroDivisionError:
    print("You can't divide by zero!")
else:
    print("Division Successful: ", result)
finally:
    print("Execution Finished!")

```

ex-01.py | ex-02-1.py | ex-02-2.py U

ex-02-2.py > ...

```python
#Parent Class
class Animal:
    def __init__(self, name):
        self.name = name
    def speak(self):
        print(f"{self.name} makes a sound.")
class Dog(Animal):
    def speak(self):
        print(f"{self.name} barks")
dog = Dog("Sheru")
dog.speak()

class Parent :                          #Single Inheritance
    def greet(self):
        print("Hello from parent!")
class Child(Parent):
    pass
obj = Child()
obj.greet()

class Parent1:                          #Multiple Inheritance
    def greet(self):
        print("hello from parent1!")
class Parent2:
    def welcome(self):
        print("Welcome from parent2!")
class Child(Parent1, Parent2):
    pass
obj = Child()
obj.greet()
obj.welcome()

class Grandparent:                      #Multileval Inheritance
    def greet(self):
        print("hello from Grandparent!")
class Parent(Grandparent):
    pass
```

ex-01.py ex-02-1.py ex-02-2.py U

ex-02-2.py > ...

```python
class Child(Parent):
    pass
obj = Child()
obj.greet()

class Parent:                          #Hierarchial Inheritance
    def greet(self):
        print("Hello from Parent")
class Child1(Parent):
    pass
class Child2(Parent):
    pass

obj1 = Child1()
obj2 = Child2()
obj1.greet()
obj2.greet()

class Base:                            #Hybrid Inheritance
    def greet(self):
        print("hello from Base")
class Derived1(Base):
    pass
class Derived2(Base):
    pass
class Hybrid(Derived1, Derived2):
    pass
obj = Hybrid()
obj.greet()

class Animal:                        #super() method in Inheritance
    def __init__(self, name):
        self.name= name
class Dog(Animal):
    def __init__(self, name, breed):
        super().__init__(name)
        self.breed=breed

dog = Dog("Sheru", "German Shefard")
print(dog.name)
print(dog.breed)

#Method Overriding
class Parent:
    def greet(self):
        print("Hello from Parent!")
class Child:
    def greet(self):
        print("hello from Child!")
child = Child()
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
```