C: Users HAFIZ COMPUTER Desktop HASNAIN OOP lab5 lab5 q1.py

lab5 q1.py | lab5 q2.py

```python
class Rectangle:
    def __init__(self,width = 4 ,height = 5 ):
        self.width = width
        self.height = height
        print("The area of given rectangle is : ",(self.width * self.height))

R1 = Rectangle ()
```

Run: main | lab5 q1

```
"C:\Program Files\Python310\python.exe" "C:/Users/HAFIZ COMPUTER/Desktop/HASNAIN/OOP/lab5/lab5 q1.py"
The area of given rectangle is :  20

Process finished with exit code 0
```

lab5 q1.py | lab5 q2.py

```python
class Rectangle:
    def __init__(self,width,height):
        self.width = width
        self.height = height
        print("The area of given rectangle is : ",(self.width * self.height))

class Square(Rectangle):
    def __init__(self,width,height):
        super().__init__(width,height)
s= Square(4,4)
```

Run: main | lab5 q2

```
"C:\Program Files\Python310\python.exe" "C:/Users/HAFIZ COMPUTER/Desktop/HASNAIN/OOP/lab5/lab5 q2.py"
The area of given rectangle is :  16

Process finished with exit code 0
```

lab5 q1.py | lab5 q2.py | lab5 q3.py

```python
class Person:
    def __init__(self,name,age):
        self.name = name
        self.age = age
    def Printdetails(self):
        print(f"Your name is : {self.name} \nYour age is : {self.age} ")
class Student(Person):
    def __init__(self,name,age,student_id,roll_no):
        super().__init__(name,age)
        self.student_id = student_id
        self.roll_no = roll_no
    def Printdetails(self):
        super().Printdetails()
        print(f"Your Student id is : {self.student_id} \nYour roll no. is : {self.roll_no} ")
class Resident(Student):
    def __init__(self,name,age,student_id,roll_no,house_no):
        super().__init__(name,age,student_id,roll_no)
        self.house_no = house_no
    def Printdetails(self):
        super().Printdetails()
        print(f"Your House no. is : {self.house_no}")
Hasnain = Resident("Muhammad Ali Hasnain",19,"cs-21068",68,681)
Hasnain.Printdetails()
```

Run: main | lab5 q3

```
Your name is : Muhammad Ali Hasnain
Your age is : 19
Your Student id is : cs-21068
Your roll no. is : 68
Your House no. is : 681
```

lab5 q1.py | lab5 q2.py | lab5 q3.py | lab5 q4.py

```python
class Hospital :
    def __init__(self,name,address):
        self.name = name
        self.address = address
class Doctor(Hospital):
    def __init__(self,name,address,specialization):
        super().__init__(name,address)
        self.specialization = specialization
class Patient(Hospital):
    def __init__(self,name,address,disease,doctor):
        super().__init__(name,address)
        self.disease = disease
        self.doctor = doctor
class Medical_test(Patient):
    def __init__(self,name,address,disease,doctor,testno):
        super().__init__(name,address,disease,doctor)
        self.testno = testno
        self.test_status = "uninitialized"
    def DisplayReport(self):
        print(f"The name of patient is : {self.name}")
        print(f"The address of patient is : {self.address}")
        print(f"The disease of patient is : {self.disease}")
```

lab5 q1.py | lab5 q2.py | lab5 q3.py | lab5 q4.py

```python
    def DisplayReport(self):
        print(f"The name of patient is : {self.name}")
        print(f"The address of patient is : {self.address}")
        print(f"The disease of patient is : {self.disease}")
        print(f"The doctor of patient is : {self.doctor}")
        print(f"The test no.  of patient is : {self.testno}")
        print(f"The test status of patient is : {self.test_status}")
        if(self.test_status == "uninitialized"):
            print("The test is starting soon!!! ")
        else:
            print("The test is in progress or completed!!! ")
Abbas = Medical_test("Abbas Raza","survey 417","Cancer","Dr. Aun Raza ","2nd")
Abbas.DisplayReport()
```

Run: main | lab5 q4

```
"C:\Program Files\Python310\python.exe" "C:/Users/HAFIZ COMPUTER/Desktop/HASNAIN/OOP/lab5/lab5 q4.py"
The name of patient is : Abbas Raza
The address of patient is : survey 417
The disease of patient is : Cancer
The doctor of patient is : Dr. Aun Raza
The test no.  of patient is : 2nd
The test status of patient is : uninitialized
The test is starting soon!!!
```