विशाल जाधव सरांचे

VJTech Academy

Inspiring Your Success...

“Python Programs- Modules and Packages in Python”

❖ Program: Write Python Program of Declare class Book having data members book id, book name and book price.

```
#Declare class Book having data members book id, book name and book price.
class Book:
    def get_Book_Info(self):
        self.book_id=int(input("Enter Book ID:"));
        self.book_name=input("Enter Book Name:");
        self.book_price=float(input("Enter Book Price:"));
    def disp_Book_Info(self):
        print("Book ID:",self.book_id);
        print("Book Name:",self.book_name);
        print("Book Price:",self.book_price);

b1=Book();
b2=Book();
b1.get_Book_Info();
b2.get_Book_Info();
b1.disp_Book_Info();
b2.disp_Book_Info();
```

OUTPUT

```
Enter Book ID:101
Enter Book Name:Kajal
Enter Book Price:700
Enter Book ID:1122
Enter Book Name:Yayati
Enter Book Price:800
```

```
Book ID: 101
Book Name: Kajal
Book Price: 700.0
Book ID: 1122
Book Name: Yayati
Book Price: 800.0
```

❖ Program: Write Python Program of Declare class Company having members company name, company address and no of employee

```
#Declare class Company having members company name, company address and no of employee
class Company:
   def get_comp_info(self):
      self.company_name=input("Enter Company Name:");
      self.company_address=input("Enter Company Address:");
      self.no_of_emp=int(input("Enter No Of Employees:"));
   def disp_comp_info(self):
      print("******COMPANY INFORMATION*****");
      print("Company Name:",self.company_name);
      print("Company Address:",self.company_address);
      print("No Of Employees:",self.no_of_emp);

c1=Company();
c1.get_comp_info();
c1.disp_comp_info();
```

OUTPUT

```
Enter Company Name:IBM
Enter Company Address:pune
Enter No Of Employees:20
```

```
******COMPANY INFORMATION*****
Company Name: IBM
Company Address: pune
No Of Employees: 20
```

❖ Program: Write Python Program to show the use of for composition

```
#for composition
class Gmail:
   def send_email(self,msg):
      print("Sending {} from gmail".format(msg));
class Yahoo:
   def send_email(self,msg):
      print("Sending {} from Yahoo".format(msg));

class Email:
   provider=Gmail();
   def set_provider(self,p):
      self.provider=p;
   def send_email(self,msg):
      self.provider.send_email(msg);

client1=Email();
client1.send_email("Hello");
client1.set_provider(Yahoo());
client1.send_email("Hello");
```

OUTPUT

```
Sending Hello from gmail
Sending Hello from Yahoo
```

❖ Program: Write Python Program on Default Constructor in Class

```
#Default Constructor in Class
class City:
  def __init__(self):
    self.city_name=input("Enter City Name:");
    self.population=int(input("Enter Population:"));
  def disp_city_info(self):
    print("******CITY INFORMATION*****");
    print("City Name:",self.city_name);
    print("City Population:",self.population);

c1=City();
c1.disp_city_info();
```

OUTPUT

```
Enter City Name:pune
Enter Population:1000000
******CITY INFORMATION*****
City Name: pune
City Population: 1000000
```

❖ Program: Write Python Program on Hierarchical Inheritance

```
#Hierarchical Inheritance
class A:
  def display_A(self):
    print("display_A method of class A");

class B(A):
  def display_B(self):
    print("display_B method of class B");

class C(A):
  def display_C(self):
    print("display_C method of class C");

b1=B();
c1=C();
print("***Object b1****");
b1.display_A();
b1.display_B();
print("***Object c1****");
c1.display_A();
c1.display_C();
```

OUTPUT

```
***Object b1****
display_A method of class A
display_B method of class B
***Object c1****
display_A method of class A
display_C method of class C
```

❖ Program: Write Python Program on Hybrid Inheritance.

```
#Hybrid Inheritance
class A:
    def display_A(self):
        print("display_A method of class A");

class B(A):
    def display_B(self):
        print("display_B method of class B");

class C:
    def display_C(self):
        print("display_C method of class C");

class D(B,C):
    def display_D(self):
        print("display_D method of class D");

d1=D();
d1.display_A();
d1.display_B();
d1.display_C();
d1.display_D();
```

OUTPUT

```
display_A method of class A
display_B method of class B
display_C method of class C
display_D method of class D
```

❖ Program: Write Python Program on Method Overriding.

```
#Method Overriding
class A:
   def display(self):
      print("Base class display method");

class B(A):
   def display(self):
      print("Derived class display method");

b1=B();
b1.display();
```

OUTPUT

```
Derived class display method
```

Program: Write Python Program of Multiple Inheritance.

```
#Multiple Inheritance
class A:
   def display_A(self):
      print("display_A method of class A");

class B:
   def display_B(self):
      print("display_B method of class B");

class C(A,B):
   def display_C(self):
      print("display_C method of class C");

c1=C();
c1.display_A();
c1.display_B();
c1.display_C();
```

OUTPUT

```
display_A method of class A
display_B method of class B
display_C method of class C
```

❖ Program: Write Python Program og Multilevel Inheritance.

```
#Multilevel Inheritance
class A:
    def display_A(self):
        print("display_A method of class A");

class B(A):
    def display_B(self):
        print("display_B method of class B");

class C(B):
    def display_C(self):
        print("display_C method of class C");

c1=C();
c1.display_A();
c1.display_B();
c1.display_C();
```

OUTPUT

```
display_A method of class A
display_B method of class B
display_C method of class C
```

❖ Program: Write Python Program to show the use of Parameterized Constructor in Class

```
#Parameterized Constructor in Class
class City:
  def __init__(self,n,p):
    self.city_name=n;
    self.population=p;
  def disp_city_info(self):
    print("******CITY INFORMATION*****");
    print("City Name:",self.city_name);
    print("City Population:",self.population);

c1=City("Solapur",35000);
c1.disp_city_info();
```

OUTPUT

```
******CITY INFORMATION*****
City Name: Solapur
City Population: 35000
```

❖ Program: Write Python Program to show the use of Single Inheritance.

```
#Single Inheritance
class A:
   def display_A(self):
      print("display_A method of class A");

class B(A):
   def display_B(self):
      print("display_B method of class B");

b1=B();
b1.display_A();
b1.display_B();
```

OUTPUT

```
display_A method of class A
display_B method of class B
```

❖ Program: Write Python Program of Declare class Student having data members rollno,name and marks

```
#Declare class Student having data members rollno,name and marks.
class Student:
   def getdata(self):
      self.rollno=1010;
      self.name="Dennis";
      self.marks=98.99;
   def display(self):
      print("Student Roll No:",self.rollno);
      print("Student Name:",self.name);
      print("Student Marks:",self.marks);

s1=Student();
s1.getdata();
s1.display();
```

OUTPUT

```
Student Roll No: 1010
Student Name: Dennis
Student Marks: 98.99
```

❖ Program: Write Python Program to show the use of Single inheritance.

```
#Single Inheritance
class Student:
   def get_stud_info(self):
      self.rollno=int(input("Enter Student Roll No:"));
      self.name=input("Enter Student Name:");
   def disp_stud_info(self):
      print("Student Roll No:",self.rollno);
      print("Student Name:",self.name);

class Test(Student):
   def get_marks(self):
      self.marks1=int(input("Enter Student Marks-1:"));
      self.marks2=int(input("Enter Student Marks-2:"));
   def disp_marks(self):
      print("Class Test-1 Marks:",self.marks1);
      print("Class Test-2 Marks:",self.marks2);

t1=Test();
t1.get_stud_info();
t1.get_marks();
t1.disp_stud_info();
t1.disp_marks();
```

OUTPUT

```
Enter Student Roll No:22
Enter Student Name:kajal
Enter Student Marks-1:90
Enter Student Marks-2:89
Student Roll No: 22
Student Name: kajal
Class Test-1 Marks: 90
Class Test-2 Marks: 89
```

❖ Program: Write Python Program to show the use of Hybrid inheritance.

```
 #Hybrid Inheritance
class Student:
    def get_stud_info(self):
        self.rollno=int(input("Enter Student Roll No:"));
        self.name=input("Enter Student Name:");
    def disp_stud_info(self):
        print("Student Roll No:",self.rollno);
        print("Student Name:",self.name);

class Test(Student):
    def get_marks(self):
        self.marks1=int(input("Enter Student Marks-1:"));
        self.marks2=int(input("Enter Student Marks-2:"));
    def disp_marks(self):
        print("Class Test-1 Marks:",self.marks1);
        print("Class Test-2 Marks:",self.marks2);
class Sport(Student):
    def get_sport_wt(self):
        self.sport_wt=int(input("Enter Sport Weight:"));
    def disp_sport_wt(self):
        print("Sport Weightage:",self.sport_wt);

print("***Test Object***");
t1=Test();
t1.get_stud_info();
t1.get_marks();
t1.disp_stud_info();
```

```
t1.disp_marks();

print("***Sport Object***");
s1=Sport();
s1.get_stud_info();
s1.get_sport_wt();
s1.disp_stud_info();
s1.disp_sport_wt();
```

OUTPUT

```
***Test Object***
Enter Student Roll No:22
Enter Student Name:kajal
Enter Student Marks-1:90
Enter Student Marks-2:80
Student Roll No: 22
Student Name: kajal
Class Test-1 Marks: 90
Class Test-2 Marks: 80
***Sport Object***
Enter Student Roll No:23
Enter Student Name:shraddha
Enter Sport Weight:43
Student Roll No: 23
Student Name: shraddha
Sport Weightage: 43
```

❖ Program: Write Python Program to show the use of Multilevel inheritance.

```
 #Multiple Inheritance
class Student:
    def get_stud_info(self):
        self.rollno=int(input("Enter Student Roll No:"));
        self.name=input("Enter Student Name:");
    def disp_stud_info(self):
        print("Student Roll No:",self.rollno);
        print("Student Name:",self.name);

class Test:
    def get_marks(self):
        self.marks1=int(input("Enter Student Marks-1:"));
        self.marks2=int(input("Enter Student Marks-2:"));
    def disp_marks(self):
        print("Class Test-1 Marks:",self.marks1);
        print("Class Test-2 Marks:",self.marks2);

class Result(Student,Test):
    def calc_total(self):
        self.total=self.marks1+self.marks2;
        print("Total Marks:",self.total);

r1=Result();
r1.get_stud_info();
r1.get_marks();
r1.disp_stud_info();
r1.disp_marks();
r1.calc_total();
```

OUTPUT

```
Enter Student Roll No:22
Enter Student Name:kajal
Enter Student Marks-1:90
Enter Student Marks-2:80
```

```
Student Roll No: 22
Student Name: kajal
Class Test-1 Marks: 90
Class Test-2 Marks: 80
Total Marks: 170
```