

Assignment 4 OOPS concept

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Q1. Explain Class and Object with respect to Object-Oriented Programming. Give a suitable example.

ans:-class:-A Class is like an object constructor, or a “blueprint” for creating objects. object:-Python is an object-oriented programming language. Everything in Python is treated as an object, including variable, function, list, tuple, dictionary, set, etc. Every object belongs to its class. object is a real world entity and it is stored in class.

```
[1]: class pwskills:

    def welcome_msg(self):
        print('welcome in pwskills')
```

Q2. Name the four pillars of OOPs.

Ans:- 1)Inheritance 2)Polymorphism 3)Encapsulation 4)Abstraction

Q3. Explain why the **init()** function is used. Give a suitable example.

ANS:- **init** is an inbuilt function of any class which is used for data passing in function. **init** is a constructor.

```
[2]: class pwskills:

    def __init__(self,student_id,phone_number,email_id):
        self.phone_number=phone_number
        self.student_id=student_id
        self.email_id=email_id

    def return_data(self):
        return self.student_id,self.phone_number,self.email_id
```

```
[3]: a=pwskills(101,556666,'aa@gmail.com')
```

```
[4]: a.return_data()
```

```
[4]: (101, 556666, 'aa@gmail.com')
```

Q4. Why is self used in OOPs?

Ans:- The self parameter is reference to the current instance of that class, and is used to access variables that belong to the class.

Q5. What is inheritance? Give an example for each type of inheritance.

Ans: Inheritance allows us to define a class that inherits all the methods and properties from another class.

```
[6]: ## Single Inheritance
      ## multiple inheritance
      ## multilevel inheritance
      ## Hierarchical inheritance
      ## hybrid inheritance
      ####example of single inheritance####

      class college:
          def func_1(self):
              print ("welcome in college")

      class class1(college):
          def func_2(self):
              print ("welcome in class")
```

```
[7]: object = class1()
      object.func_1()
      object.func_2()
```

```
welcome in college
welcome in class
```

```
[ ]:
```