CS-594: Python Laboratory

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Topic - INHERITANCE AND EXCEPTION

Questions Related To OOPs

1.Employee Class

Write a class named Employee that holds the following data about an employee in attributes: name, ID number, department, and job title.

Once you have written the class, write a program that creates three Employee objects to hold the following data:

Name	ID Number	Department	Job Title
Susan Meyers	47899	Accounting	VicePresident
Mark Jones	39119	IT	Programmer
Joy Rogers	81774	Manufacturing	Engineer

The program should store this data in the three objects, then display the data for each employee on the screen.

2.RetailItem Class

Write a class named RetailItem that holds data about an item in a retail store. The class should store the following data in attributes: item description, units in inventory, and price.

Once you have written the class, write a program that creates three RetailItem objects and stores the following data in them:

	Description	Units in Inventory	Price
Item #1	Jacket	12	59.95
Item #2	Designer	40	34.95
Item #3	Jeans Shirt	20	24.95

Questions Related To Inheritance

3. Look at the following class definition:

```
class Bird:

def __init__(self, bird_type):

self._ _bird_type = bird_type
```

Write the code for a class named Duck that is a subclass of the Bird class. The Duck class's _ _init_ _ method should call the Bird class's _ _init_ _ method, passing 'duck' as an argument.

4. Employee and ProductionWorker Classes

Write an Employee class that keeps data attributes for the following pieces of information:

• Employee name

• Employee number

Next, write a class named ProductionWorker that is a subclass of the Employee class. The ProductionWorker class should keep data attributes for the following information:

• Shift number (an integer, such as 1, 2, or 3)

• Hourly pay rate

The workday is divided into two shifts: day and night. The shift attribute will hold an integer value representing the shift that the

employee works. The day shift is shift 1 and the night shift is shift 2. Write the appropriate accessor and mutator methods for each class.

Once you have written the classes, write a program that creates an object of the ProductionWorker class and prompts the user to enter data for each of the object's data attributes. Store the data in the object, then use the object's accessor methods to retrieve it and display it on the screen.

Questions Related To Exception Handing

Average of Numbers(write these code and use in below two questions)

Assume a file containing a series of integers is named numbers.txt and exists on the computer's disk. Write a program that calculates the average of all the numbers stored in the file.

Modify the program that you wrote for Average of Numbers so it handles the following exceptions:

5.It should handle any IOError exceptions that are raised when the file is opened and data is read from it.

6.It should handle any ValueError exceptions that are raised when the items that are read from the file are converted to a number.