

Basic Python

Lab Exercise 5

1. Classes

1A. Rewrite Lab 1

Rewrite Lab 1. Create classes for each type of Shape. Also, create a base class *Shape* and have the other classes inherit from Shape.

1B. Personnel Application.

You will write an application that manages inventory for the Acme Corporation. This application will allow you to read data from an inventory file and modify it.

The data includes the following fields.

1. Item SKU
2. Item name
3. Item unit cost.
4. Item quantity in stock.

You will write an application that reads data from a file (*inventory.dat*) and loads it into the application. The application will allow users to see a total cost of inventory report as well as modify the quantity in stock and the unit cost. Use object oriented methodology and programming to implement this application.

The output should be a query prompt that will allow the end user to do the following:

1. Generate the current cost of inventory report
2. Modify the unit cost for any given item.
3. Add a new item to the inventory list (i.e. prompt for name, quantity and cost).
4. Write the data back to the *inventory.dat* file.

1C. Epub database

In the data directory there is a file called *ebook2016.csv*. Use this file for the lab.

- A. Read the file. Create an *ebook* object for each ebook listed.
- B. Create a dictionary that stores the ebook objects. Use the ISBN as the key.
- C. Allow the user to query the dictionary, specifically, allow the user to specify only books that are available after a certain date. Use the *datetime* module to help you.
- D. Allow the user to list only active books
- E. Create a list of subjects from the Subject field. Use this to allow users to query books by subject.