

# CDSRUS

## Problem Statement

You are going shopping in an online music store (called CDSRUS). You have \$100. Your goal is to buy as many CD's as you can with your money without going over your \$100 allotment. Note there is no tax in this store and you can only buy one of each CD.

Sample output:

I spent \$98.00 and bought the following CD's:

Green Day, Dookie, \$7.99

ACDC : ACDC Live \$15.87

Alan Parsons Project, The : Pyramid \$14.84

Amos, Tori : Little Earthquakes \$15.17

B-52's, The : Wild Planet \$21.62

Beatles, The : The Beatles-1967-1970 (Disc 2) \$22.51

## Approach – Roadmap to the solution

- 1) Make a class CD
  - a. It should have private fields (global variables) for
    - i. Price
    - ii. Album name
    - iii. Artist name
  - b. Make at least one constructor that allows for initialization of the price, album and artist
  - c. Include a detailed toString method
  - d. Include three accessor methods:
    - i. getPrice()
    - ii. getAlbum()
    - iii. getArtist
  - e. test the class!
- 2) Make a second class that is a collection of CD's (called CDCollection)
  - a. Include a private field for this class that is an ArrayList of CD's

```
ArrayList<CD> joe = new ArrayList<CD>();
```

- b. The constructor for the CDCollection class should take in a String (or multiple Strings depending how you want to access the database) that represents the file name for the CD database. The following line of code should be in the client file:

```
CDCollection mary = new CDCollection("CDSRUS.txt");
```

- c. The CDCollection constructor should do the following:
        - i. Read in a CD artist, price and album from the appropriate file(s)
        - ii. Construct a CD object with this read in data
        - iii. Add the constructed CD object to the mary ArrayList
        - iv. Repeat above until all data is read in from the file