Lab Problems

Lab Problem 1 In this problem, we will be working with the BookData class that you created in an ICA.

Step 1: From the class website in the LAB link, download these two files: bookdata.py and bookfile.txt.

You will see the BookData class defined and the shell of a main () function.

Step 2: Instead of prompting the user for the information on books as we did in the ICA, you will read a file containing book information. Each line of the file gives the title, author and rating of a book separated by commas. Here is an example line in the file:

```
A Tale of Two Cities, Charles Dickens, 5
```

(Note: There is not a header defining the format of the file.)

Your task is to create a function process_input (filename) that takes a string argument that is the name of the book data file, reads the file and creates a dictionary of BookData objects. For each line in the file, make an entry in the dictionary with the title as the key and a BookData object as its value.

The function must then return the dictionary that you created.

Step 3: In main(), after the prompt for the filename, call your process_input() function and then print out the dictionary that was returned so that you can verify that the dictionary is correct.

Step 4: The while loop in main () prompts the user for a title. Your task is to check to see if the title is in the dictionary and if it is, print out "Rating is ", followed by its rating. If it is not in the dictionary, print out the message "There is no information on that book.".

ANS:

```
def process_data(filename):
    file = open(filename)
    book_data = {}
    for line in file:
        line_list = line.split(",")
        title,author,rating = line_list
        # note: the order of author and title differ
        # note: the order of author and title differ
        # from data file
        book_obj = BookData(author, title, int(rating))
        book_data[title] = book_obj
    return book_data
```

```
def main():
    filename = input("Enter filename: ")
    all books = process data(filename)
    # Show the dictionary contents
    print("Dictionary contents: ")
    for title, obj in all_books.items():
        print(title, ":", obj)
    print()
   prompt = ''
    while prompt != 'done':
        title = input("Book title: ")
        if title in all books:
            obj = all books[title]
            print("Rating is ",obj.get rating())
        else:
            print("There is no information on that book.")
        prompt = input('Enter "done" if finished: ')
```

main()

Lab Problem 2

```
>>> line = "Daniel J. Solove: The Digital Person: Technology and
Privacy Today"
>>> i = line.find(":")
>>> author = line[:i]
>>> author
'Daniel J. Solove'
>>>
>>> title = line[i+1:]
>>> title
' The Digital Person: Technology and Privacy Today'
>>>
```

Note: you should strip both author and title to get rid of any leading or trailing whitespace.