

## JA111 Day 14 Assignment

**Q1)** Write a program to traverse (or iterate) ArrayList? (Using Iterator, for loop and enhanced for loop) Note: Create a ArrayList of String

**Q2)** What is the difference between ArrayList and Array?

**Q3)** Explain AutoBoxing and Auto UnBoxing with Examples.

**Q4)**

The district central library needs an application to store book details of their library. The clerk has all the rights to add a new book, search for any book, display the book details and should update the count of the total number of books.

Create a Bean class Book with the following attributes:

int isbn

String bookName

String author

Create a class Library that will have instance variable:

List<Books> bookList = new ArrayList<>();

Include the following public methods:

1. void addBook(Book book): This method should add the book object to the booklist.

2. boolean isEmpty(): This method should return true if the booklist is empty else return false.

3. List<Book> viewAllBooks(): This method should return the list of books maintained in the library.

4. List<Book> viewBooksByAuthor(String author ) - This method should return a list of books written by the author passed as an argument. When you display an empty list it should print the message "The list is empty".

5. int countNoOfBook(String bookName) - this method should return the count of books with the name passed as an argument.

Write a Main class with a main method to test the above functionalities.

Sample Input 1:

1.Add Book

2.Display all book details

3.Search Book by author

4.Count number of books - by book name

5.Exit

Enter your choice:

1

Enter the isbn no:

123

Enter the book name:

Java

Enter the author name:

Bruce Eckel

Output:

Book added successfully

Sample Input 2:

1.Add Book

2.Display all book details

3.Search Book by author

4.Count number of books - by book name

5.Exit

Enter your choice:

1

Enter the isbn no:

124

Enter the book name:

C++

Enter the author name:

Eric Nagler

Output:

Book added successfully

Sample Input 3:

1.Add Book

2.Display all book details

3.Search Book by author

4.Count number of books - by book name

5.Exit

Enter your choice:

3

Enter the author name:

Henry

Output:

None of the book published by the author Henry

Sample Input 4:

1.Add Book

2.Display all book details

3.Search Book by author

4.Count number of books - by book name

5.Exit

Enter your choice:

3

Enter the author name:

Eric Nagler

Output:

ISBN no: 124

Book name: C++

Author name: Eric Nagler

Sample Input 4:

1.Add Book

2.Display all book details

3.Search Book by author

4.Count number of books - by book name

5.Exit

Enter your choice:

5

Output:

Thank You..!!