import java.util.ArrayList;

import java.util.Scanner;

interface library\_operations{

public void issue\_book();

public void add\_book();

public void return\_book();

public void see\_data();

public void issue\_books\_data();

}

class functions implements library\_operations{

ArrayList <String> book\_data = new ArrayList<String>();

ArrayList<Integer> book\_quantity = new ArrayList<>();

ArrayList<String> issued\_book = new ArrayList<String>();

void operation(){

System.out.println("----------------------------HOME PAGE----------------------------------");

Scanner sc = new Scanner(System.in);

System.out.println("1. Issue Book");

System.out.println("2. Add book");

System.out.println("3. Return book");

System.out.println("4. See book data");

System.out.println("5. Show Issued Books");

System.out.println("6. Exit");

int n = sc.nextInt();

if(n==1){

issue\_book();

}

else if(n==2){

add\_book();

} else if(n==3){

return\_book();

}

else if (n==4){

see\_data();

}

else if (n==5){

issue\_books\_data();

}

else if (n==6){

System.exit(0);

}

}

@Override

public void issue\_book() {

System.out.println("----------------------------ISSUE BOOK----------------------------------");

System.out.println("Enter the book you want to issue");

for (int i=0;i<book\_data.size();i++){

System.out.println(i+". "+book\_data.get(i)+" ("+book\_quantity.get(i)+")");

}

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (book\_quantity.get(n)==0){

System.out.println("No more books available sorry! Get any other\n\n");

issue\_book();

}

else{

issued\_book.add(book\_data.get(n));

book\_quantity.set(n,book\_quantity.get(n)-1);

System.out.println("Done!\n\n");

operation();

}

}

@Override

public void add\_book() {

System.out.println("----------------------------ADDING BOOK ----------------------------------");

System.out.println("Enter no. of the book to add");

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

String name;

int quantity;

for (int i=0;i<n;i++){

System.out.println("Enter name of the book");

name = sc.next();

book\_data.add(name);

System.out.println("Enter no. of books");

quantity = sc.nextInt();

book\_quantity.add(quantity);

}

System.out.println("Done!\n\n");

operation();

}

@Override

public void return\_book() {

System.out.println("----------------------------RETURNING BOOK ----------------------------------");

System.out.println("Enter the book you want to return");

for (int i=0;i<book\_data.size();i++){

System.out.println(i+". "+book\_data.get(i)+" "+book\_quantity.get(i));

}

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

issued\_book.remove(book\_data.get(n));

book\_quantity.set(n,book\_quantity.get(n)+1);

System.out.println("Done!\n\n");

operation();

}

@Override

//--------------------------------------ShowBooks------------------------------------------------

public void see\_data() {

System.out.println("Books available in the library");

for (int i=0;i<book\_data.size();i++){

System.out.println(i+". "+book\_data.get(i)+" "+book\_quantity.get(i));

}

System.out.println("\n\n");

operation();

}

@Override

//--------------------------------------Issue Books------------------------------------------------

public void issue\_books\_data() {

System.out.println("Issued Books data");

for (int i=0;i<issued\_book.size();i++){

System.out.println(i+". "+issued\_book.get(i));

}

System.out.println("\n\n");

operation();

}

}

public class library extends functions {

library(){

book\_data.add("Theory of everything");

book\_data.add("Java Fundamentals");

book\_data.add("C++ for you");

book\_quantity.add(2);

book\_quantity.add(4);

book\_quantity.add(3);

}

public static void main(String [] args){

System.out.println("WELCOME TO LPU LIBRARY");

library l = new library();

l.operation();

}

}

## OUTPUT











