**Case Study - 2**

import java.util.Scanner;

abstract class Item{ //superclass

private int identificationNo;

private int noOfCopies;

private String title;

public abstract void Item();

//getters and setters

public int getIdentificationNo() {

return identificationNo;

}

public void setIdentificationNo(int identificationNo) {

this.identificationNo = identificationNo;

}

public int getNoOfCopies() {

return noOfCopies;

}

public void setNoOfCopies(int noOfCopies) {

this.noOfCopies = noOfCopies;

}

public String getTitle() {

return title;

}

public void setTitle(String title) {

this.title = title;

}

public void addItem()

{

System.out.println("adding more items in the library");

Scanner sc = new Scanner(System.in);

System.out.println("enter new Identication no. of book");

int newIdenticationNo = sc.nextInt();

System.out.println("enter no. of copies present of new edition in the library");

int newNoOfCopies= sc.nextInt();

System.out.println("enter the title of new book: ");

String newTitle = sc.next();

System.out.println("Identification no. of new book is " +newIdenticationNo+", no. of copies present in the library of this new book are " +newNoOfCopies+" of book title "+newTitle);

}

void checkIn()

{

noOfCopies = noOfCopies + 1;

System.out.println("no. of copies of the book after check in: " +noOfCopies);

}

void checkOut()

{

noOfCopies = noOfCopies - 1;

System.out.println("no. of copies of the book after check out: "+noOfCopies);

}

void print()

{

System.out.println("Identification no. is "+getIdentificationNo()+ ", no. of copies present in the library is " +getNoOfCopies()+ " of book title " +getTitle());

}

}

abstract class WrittenItem extends Item //subclass of Item

{

String authorName = "J. k. Rowling";

String authorAddress = "United Kindom";

@Override

public void Item()

{

System.out.println("author name of the book is: " +authorName+ " and author address is: "+authorAddress);

}

}

class Book extends WrittenItem //subclass of WrittenItem

{

public Book()

{

System.out.println("Book class which is a subclass of WrittenItem class is called");

}

}

class JournalPaper extends WrittenItem //subclass of WrittenItem

{

public JournalPaper()

{

System.out.println("JournalPaper class, subclass of WrittenItem class is called ");

}

void yearOfBook()

{

Scanner sc = new Scanner(System.in);

System.out.println("enter book published year ");

int yearPublished = sc.nextInt();

System.out.println("the year of the book published by author "+authorName+" is " +yearPublished);

}

}

abstract class MediaItem extends Item //subclass of Item

{

int runTime;

public void Item()

{

System.out.println("Add More media items");

}

}

class Video extends MediaItem{ //subclass of MediaItem

String director;

String genre;

int yearReleased;

public Video()

{

System.out.println("Video class of Media Item class is called");

}

}

public class CD extends MediaItem { //subclass of MediaItem

String artish;

String genre;

public CD()

{

System.out.println("CD class of Media Item class is called");

}

public static void main(String[] args)

{

CD c = new CD();

Book b= new Book();

JournalPaper j = new JournalPaper();

Video v = new Video();

c.setIdentificationNo(202);

c.setNoOfCopies(50);

c.setTitle("Harry Potter");

c.Item();

c.checkIn();

c.print();

c.addItem();

b.Item();

j.yearOfBook();

}

}