Báo cáo Lab 06

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Bài 2: Creating the Book class

package media;

import java.util.ArrayList;

import java.util.List;

public class Book {

    private String title;

    private String category;

    private float cost;

    private List<String> authors = new ArrayList<String>();

    public String getTitle() {

        return title;

    }

    public void setTitle(String title) {

        this.title = title;

    }

    public String getCategory() {

        return category;

    }

    public void setCategory(String category) {

        this.category = category;

    }

    public float getCost() {

        return cost;

    }

    public void setCost(float cost) {

        this.cost = cost;

    }

    public List<String> getAuthors() {

        return authors;

    }

    public void setAuthors(List<String> authors) {

        this.authors = authors;

    }

    public void addAuthor(String authorName) {

        if (authors.contains(authorName) == false) {

            authors.add(authorName);

        } else

            return;

    }

    public void removeAuthor(String authorName) {

        if (authors.contains(authorName) == true) {

            authors.remove(authorName);

        } else

            return;

    }

}

Bài 3: Creating the Media class

Media.java

package media;

public class Media {

    private String title;

    private String category;

    private float cost;

    public String getTitle() {

        return title;

    }

    public void setTitle(String title) {

        this.title = title;

    }

    public String getCategory() {

        return category;

    }

    public void setCategory(String category) {

        this.category = category;

    }

    public float getCost() {

        return cost;

    }

    public void setCost(float cost) {

        this.cost = cost;

    }

}

Book.java

package media;

import java.util.ArrayList;

import java.util.List;

public class Book extends Media {

    private List<String> authors = new ArrayList<String>();

    public List<String> getAuthors() {

        return authors;

    }

    public void setAuthors(List<String> authors) {

        this.authors = authors;

    }

    public void addAuthor(String authorName) {

        if (authors.contains(authorName) == false) {

            authors.add(authorName);

        } else

            return;

    }

    public void removeAuthor(String authorName) {

        if (authors.contains(authorName) == true) {

            authors.remove(authorName);

        } else

            return;

    }

    public Book(String title) {

        super(title);

    }

    public Book(String title, String category) {

        super(title, category);

    }

    public Book(String title, String category, List<String> authors) {

        super(title, category);

        this.authors = authors;

    }

}

DigitalVideoDisc.java

package media;

public class DigitalVideoDisc extends Media {

    private int length;

    private String director;

    public int getLength() {

        return length;

    }

    public void setLength(int length) {

        this.length = length;

    }

    public String getDirector() {

        return director;

    }

    public void setDirector(String director) {

        this.director = director;

    }

    public DigitalVideoDisc(String title, String category, String director, int length, float cost) {

        super(title, category, cost);

        this.director = director;

        this.length = length;

    }

    public DigitalVideoDisc(String title) {

        super(title);

    }

    public DigitalVideoDisc(String title, String category) {

        super(title, category);

    }

    public DigitalVideoDisc(String title, String category, String director) {

        super(title, category);

        this.director = director;

    }

}

Bài 4: Update the Order class to work with Media

Order.java

package order;

import java.util.ArrayList;

import media.Media;

import utils.MyDate;

public class Order {

    public static final int MAX\_LIMITTED\_ORDERED = 5;

    private static int nbOrders = 0;

    public static final int MAX\_NUMBERS\_ORDERED = 10;

    private ArrayList<Media> itemOdered = new ArrayList<Media>();

    private int qtyOrdered = 0;

    private MyDate dateOrdered = new MyDate();

    public ArrayList<Media> getItemOdered() {

        return itemOdered;

    }

    public void setItemOdered(ArrayList<Media> itemOdered) {

        this.itemOdered = itemOdered;

    }

    public int getqtyOrdered() {

        return this.qtyOrdered;

    }

    public void setDateOrder(MyDate dateOrder) {

        this.dateOrdered = dateOrder;

    }

    public Order() {

        if (nbOrders < MAX\_LIMITTED\_ORDERED) {

            nbOrders++;

        } else

            return;

    }

    public int getNbOrder() {

        return nbOrders;

    }

    public void addMedia(Media media) {

        if (itemOdered.size() < MAX\_LIMITTED\_ORDERED) {

            qtyOrdered++;

            itemOdered.add(media);

            System.out.println("add media successfully");

        } else

            System.out.println("The list order is full");

    }

    public void removeMedia(Media media) {

        boolean check = false;

        itemOdered.remove(media);

        for (Media md : itemOdered) {

            if (md.getId() == media.getId()) {

                itemOdered.remove(media);

                qtyOrdered--;

                System.out.println("remove successfully");

                check = true;

            }

        }

        if (check == false)

            System.out.println("can't find media");

    }

    public float totalCost() {

        float totalCost = 0;

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

            totalCost += itemOdered.get(i).getCost();

        }

        return totalCost;

    }

    public void printFull() {

        System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Order\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

        System.out.println("Date: " + this.dateOrdered.getDay() + "/" + this.dateOrdered.getMonth() + "/"

                + this.dateOrdered.getYear());

        System.out.println("Ordered Item: ");

        for (Media media : itemOdered) {

            media.printInfo();

        }

        System.out.println("Total cost: " + this.totalCost());

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

    }

    public Media getALuckyitem() {

        int min = 0;

        int max = qtyOrdered - 1;

        int range = max - min + 1;

        int lucky = (int) (Math.random() \* range) + min;

        System.out.println("\*\*\* Lucky number is: " + lucky + " \*\*\*");

        return itemOdered.get(lucky);

    }

}

Bài 5: Create a complete console application in the Aims class 3

Aims.java

import java.util.ArrayList;

import java.util.Collections;

import java.util.Scanner;

import media.Book;

import media.DigitalVideoDisc;

import media.Media;

import order.Order;

import utils.MyDate;

public class Aims {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);

        Scanner scan1 = new Scanner(System.in);

        int choose;

        Boolean check = true;

        Order order = null;

        ArrayList<Media> mediaList = new ArrayList<Media>();

        MyDate dateOrdered = new MyDate(26, 7, 2001);

        DigitalVideoDisc dvd1 = new DigitalVideoDisc(1, "The Lion King", "animation", 87, "Roger Allers", 19.95f);

        DigitalVideoDisc dvd2 = new DigitalVideoDisc(2, "Justice League", "superheroes", 240, "Zach Synder", 22.95f);

        DigitalVideoDisc dvd3 = new DigitalVideoDisc(3, "Up", "animation", 96, "Pete Docter", 14.5f);

        DigitalVideoDisc dvd4 = new DigitalVideoDisc(4, "The Incredibles", "animation", 115, "Brad Bird", 19.95f);

        Book book1 = new Book(5, "It", "horror", 12f, "Stephen King");

        Book book2 = new Book(6, "The Shining", "horror", 9f, "Stephen King");

        Book book3 = new Book(7, "Dragon", "horror", 15.5f, "Lovecraft");

        Book book4 = new Book(8, "The Pillow Book", "biography", 12f, "Sei Shonagon");

        Collections.addAll(mediaList, dvd1, dvd2, dvd3, dvd4, book1, book2, book3, book4);

        while (check) {

            showMenu();

            choose = scan.nextInt();

            switch (choose) {

                case 1: {

                    order = new Order();

                    order.setDateOrder(dateOrdered);

                    System.out.println("create order successfully");

                    break;

                }

                case 2: {

                    System.out.println("id: ");

                    int id = scan.nextInt();

                    boolean tmp = false;

                    for (Media media : mediaList) {

                        if (media.getId() == id) {

                            Add(order, media);

                            tmp = true;

                        }

                    }

                    if (tmp == false)

                        System.out.println("This id is not valid");

                    break;

                }

                case 3: {

                    System.out.println("id to remove:");

                    int idRm = scan.nextInt();

                    Delete(order, idRm);

                    break;

                }

                case 4: {

                    order.printFull();

                    break;

                }

                case 0: {

                    check = false;

                    break;

                }

            }

        }

        scan.close();

        scan1.close();

    }

    public static void showMenu() {

        System.out.println("\nOrder Management Application: ");

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

        System.out.println("1. Create new order");

        System.out.println("2. Add item to the order");

        System.out.println("3. Delete item by id");

        System.out.println("4. Display the items list of order");

        System.out.println("0. Exit");

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

        System.out.println("Please choose a number: 0-1-2-3-4");

    }

    public static void Add(Order order, Media item) {

        order.addMedia(item);

    }

    public static void Delete(Order order, int id) {

        order.removeMedia(id);

    }

}

Order.java

package order;

import java.util.ArrayList;

import media.Media;

import utils.MyDate;

public class Order {

    public static final int MAX\_LIMITTED\_ORDERED = 5;

    private static int nbOrders = 0;

    public static final int MAX\_NUMBERS\_ORDERED = 10;

    private ArrayList<Media> itemOdered = new ArrayList<Media>();

    private int qtyOrdered = 0;

    private MyDate dateOrdered = new MyDate();

    public ArrayList<Media> getItemOdered() {

        return itemOdered;

    }

    public void setItemOdered(ArrayList<Media> itemOdered) {

        this.itemOdered = itemOdered;

    }

    public int getqtyOrdered() {

        return this.qtyOrdered;

    }

    public void setDateOrder(MyDate dateOrder) {

        this.dateOrdered = dateOrder;

    }

    public Order() {

        if (nbOrders < MAX\_LIMITTED\_ORDERED) {

            nbOrders++;

        } else

            return;

    }

    public int getNbOrder() {

        return nbOrders;

    }

    public void addMedia(Media media) {

        if (itemOdered.size() < MAX\_LIMITTED\_ORDERED) {

            qtyOrdered++;

            itemOdered.add(media);

            System.out.println("add media successfully");

        } else {

            System.out.println("The list order is full");

        }

    }

    public void removeMedia(int id) {

        boolean check = false;

        check = itemOdered.removeIf((media) -> {

            qtyOrdered--;

            return media.getId() == id;

        });

        if (check == false)

            System.out.println("can't find media");

    }

    public float totalCost() {

        float totalCost = 0;

        for (Media media : itemOdered) {

            totalCost += media.getCost();

        }

        return totalCost;

    }

    public void printFull() {

        System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Order\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

        System.out.println("Date: " + this.dateOrdered.getDay() + "/" + this.dateOrdered.getMonth() + "/"

                + this.dateOrdered.getYear());

        System.out.println("Ordered Item: ");

        for (Media media : itemOdered) {

            media.printInfo();

        }

        System.out.println("Total cost: " + this.totalCost());

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

    }

    public Media getALuckyitem() {

        int min = 0;

        int max = qtyOrdered - 1;

        int range = max - min + 1;

        int lucky = (int) (Math.random() \* range) + min;

        System.out.println("\*\*\* Lucky number is: " + lucky + " \*\*\*");

        return itemOdered.get(lucky);

    }

}

Media.java

package media;

public class Media {

    private int id;

    private String title;

    private String category;

    private float cost;

    public String getTitle() {

        return title;

    }

    public int getId() {

        return id;

    }

    public void setId(int id) {

        this.id = id;

    }

    public void setTitle(String title) {

        this.title = title;

    }

    public String getCategory() {

        return category;

    }

    public void setCategory(String category) {

        this.category = category;

    }

    public float getCost() {

        return cost;

    }

    public void setCost(float cost) {

        this.cost = cost;

    }

    public Media(String title) {

        this.title = title;

    }

    public Media(String title, String category) {

        this.title = title;

        this.category = category;

    }

    public Media(String title, String category, float cost) {

        this.title = title;

        this.category = category;

        this.cost = cost;

    }

    public Media(int id, String title, String category, float cost) {

        this.id = id;

        this.title = title;

        this.category = category;

        this.cost = cost;

    }

    public void printInfo() {

    }

}

Book.java

package media;

import java.util.ArrayList;

import java.util.List;

public class Book extends Media {

    private List<String> authors = new ArrayList<String>();

    public List<String> getAuthors() {

        return authors;

    }

    public void setAuthors(List<String> authors) {

        this.authors = authors;

    }

    public void addAuthor(String authorName) {

        if (authors.contains(authorName) == false) {

            authors.add(authorName);

        } else

            return;

    }

    public void removeAuthor(String authorName) {

        if (authors.contains(authorName) == true) {

            authors.remove(authorName);

        } else

            return;

    }

    public Book(String title) {

        super(title);

    }

    public Book(String title, String category) {

        super(title, category);

    }

    public Book(String title, String category, List<String> authors) {

        super(title, category);

        this.authors = authors;

    }

    public Book(int id, String title, String category, float cost, String authors) {

        super(id, title, category, cost);

        addAuthor(authors);

    }

    public void printInfo() {

        System.out.println("Book: " + getId() + " - " + getTitle() + " - " + getCategory() + " - " + getAuthors()

                + " - " + getCost());

    }

}

DigitalVideoDisc.java

package media;

public class DigitalVideoDisc extends Media {

    private int length;

    private String director;

    public int getLength() {

        return length;

    }

    public void setLength(int length) {

        this.length = length;

    }

    public String getDirector() {

        return director;

    }

    public void setDirector(String director) {

        this.director = director;

    }

    public DigitalVideoDisc(String title, String category, String director, int length, float cost) {

        super(title, category, cost);

        this.director = director;

        this.length = length;

    }

    public DigitalVideoDisc(String title) {

        super(title);

    }

    public DigitalVideoDisc(String title, String category) {

        super(title, category);

    }

    public DigitalVideoDisc(String title, String category, String director) {

        super(title, category);

        this.director = director;

    }

    public DigitalVideoDisc(int id, String title, String category, int length, String director, float cost) {

        super(id, title, category, cost);

        this.director = director;

        this.length = length;

    }

    public void printInfo() {

        System.out.println("DVD: " + getId() + " - " + getTitle() + " - " + getCategory() + " - " + getDirector()

                + " - " + getLength()

                + " - " + getCost());

    }

}

Kết quả chạy:

Bước 1: Tạo 1 order



Bước 2: Thêm item vào order (thêm theo id)

Ảnh có chứa văn bản

Mô tả được tạo tự động

Ảnh có chứa văn bản

Mô tả được tạo tự động

Ảnh có chứa văn bản

Mô tả được tạo tự động

Bước 3: Xem order đã thêm Ảnh có chứa văn bản

Mô tả được tạo tự động

Bước 4: Xóa 1 item theo id bất kỳ (id: 3)

Ảnh có chứa văn bản

Mô tả được tạo tự động

(Xóa thành công)

Bước 5: Thoát

Ảnh có chứa văn bản

Mô tả được tạo tự động