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package filslibrary;

import javax.swing.JOptionPane;

/**
 * @author Ondina
 * Exercises:
 * 1. Insert comments.
 * 2. Call the searchInCatalog method, in which you search for
the author.
 * 3. Write a method for the class Catalog, in which you
search a book taking
 * into account its title and/or one of its authors
 * 4. What happens if I call the addBook function only once?
 * 5. Think at possible errors and insert validations
(example: if i don't
 * insert any book name with JOptionPane.showInputDialog)!
 */

class Person
{
    private String lastName;
    private String firstName;

    public Person(String ln, String fn)
    {
        this.lastName=ln;
        this.firstName =fn;
    }

    public Boolean Equals(Person p)
    {
        if ((this.lastName.equals(p.lastName))
            &&(this.firstName.equals(p.firstName)))
        {
            return true;
        }
        return false;
    }

    public String toString()
    {
        return (this.lastName+" "+this.firstName+"");
    }
}

class Book
{
    private String title;
    private static Integer TVA=10/100;
    private Double unitaryPrice;
    private Double sellingPrice;
    private Person[] authors;
    private int noAuthors;

    public Book(String t, Double up)
    {

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        this.title=t;
        this.unitaryPrice=up;

this.sellingPrice=this.unitaryPrice+TVA*this.unitaryPrice;
        this.authors = new Person[2];
    }

    public String GetTitle()
    {
        return (title);
    }

    public Person[] GetAuthors()
    {
        return this.authors;
    }

    public void computeSellingPrice()
    {
        this.sellingPrice=this.unitaryPrice+TVA;
    }

    public void addAuthor(String lastName, String firstName)
    {
        this.authors[this.noAuthors++] = new Person(lastName,
firstName);
    }

    public String toString()
    {
        StringBuilder bookInfo = new StringBuilder();
        bookInfo.append("Book ");
        bookInfo.append(this.title);
        bookInfo.append(" has the following selling price: ");
        bookInfo.append(this.sellingPrice);
        bookInfo.append(" and is written by: ");
        for (int i=0;i<noAuthors;i++)
        {
            bookInfo.append(this.authors[i]);
        }
        return bookInfo.toString();
    }
}

class BookDescription
{
    private String presentation;
    private Book describedBook;

    public BookDescription(String p, String t, Double up)
    {
        this.presentation=p;
        this.describedBook=new Book(t, up);
    }

    public Book GetBook()
    {

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        return this.describedBook;
    }

    public String toString()
    {
        return (this.describedBook+" "+this.presentation);
    }
}

class Catalog
{
    private BookDescription[] entries;
    private int noEntries;

    public Catalog()
    {
        this.noEntries = 0;
        this.entries=new BookDescription[2];
    }

    public void addBookDescription(String p, String t, Double
up)
    {
        BookDescription bd = new BookDescription(p,t,up);
        // set the selling price for the book
        bd.GetBook().computeSellingPrice();
        this.entries[this.noEntries++]= bd;
    }

    public void addBookDescription(BookDescription bd)
    {
        // set the selling price for the book
        bd.GetBook().computeSellingPrice();
        this.entries[this.noEntries++]= bd;
    }

    public void SearchInCatalog(String bookTitle)
    {
        for (int i=0;i<this.entries.length;i++)
        {
            Book bd=this.entries[i].GetBook();
            if (bd.GetTitle().equalsIgnoreCase(bookTitle))
            {
                System.out.println(bd);
            }
        }
    }

    public void SearchInCatalog(Person bookAuthor)
    {
        for (int i=0;i<this.entries.length;i++)
        {
            Book bd = this.entries[i].GetBook();
            Person[] pp = bd.GetAuthors();
            for (int j=0;j<pp.length;j++)
            {
                if (pp[j].Equals(bookAuthor))

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        {
            System.out.println(bd);
            break;
        }
    }
}

public void Display()
{
    for (int i=0;i<this.entries.length;i++)
    {
        Book bd = this.entries[i].GetBook();
        System.out.println(bd);
    }
}

public class FILSLibrary {
    static Catalog filsCatalog = new Catalog();
    static void addBook()
    {
        String bookName = JOptionPane.showInputDialog(null,
            "Insert a book name:");
        Double bookUnitaryPrice = Double.parseDouble
(JOptionPane.showInputDialog
            (null,"Insert a book unitary price:"));
        String bookDescription = JOptionPane.showInputDialog
(null,
            "Insert a book description:");
        BookDescription bd = new BookDescription
(bookDescription, bookName,
            bookUnitaryPrice);
        String authorLastName = JOptionPane.showInputDialog
(null,
            "Insert an author last name:");
        String authorFirstName = JOptionPane.showInputDialog
(null,
            "Insert an author first name:");
        bd.GetBook().addAuthor(authorLastName,
authorFirstName);
        authorLastName = JOptionPane.showInputDialog(null,
            "Insert an author last name:");
        authorFirstName = JOptionPane.showInputDialog(null,
            "Insert an author first name:");
        bd.GetBook().addAuthor(authorLastName,
authorFirstName);
        filsCatalog.addBookDescription(bd);
    }

    public static void main(String[] args) {
        addBook();
        addBook();
        filsCatalog.Display();
        filsCatalog.SearchInCatalog("Alice in Wonderland");
    }
}

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