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SUBJECT	Information Technology	DATE	June 2023
GRADE	11	MARKS	100
PAPER	Practical Examination	MODERATOR	Ms Kench
		DURATION	2 Hours + 30 min printing

NAME

MEMO

QUESTION 1

56 MARKS

```

package lee;

import java.time.*;
import java.time.format.DateTimeFormatter;

//1.1 [1]
public class Movie ✓
{
    //1.2 [3] private✓ correct types✓ correct field names✓
    private String name;
    private String movieIncome;
    private String firstWeekendIncome;
    private LocalDate releaseDate;
    private String distributor;

    //1.3 [4] public static✓ final✓ String, correct field name✓ correct assignment✓
    public static final String UNITED = "United International Pictures" ;
    public static final String UNIVERSAL = "Universal Pictures";
    public static final String STERKINEKOR = "Ster-Kinekor Pictures";

    //1.4 [3] private static✓ data type & field name✓ assigned zero✓
    private static double totalIncome = 0;
    private static int movieCount = 0;

    //1.5 [4]
    public Movie✓ (int r, String n, String t, String f, String rD, String d)
    ✓ correct parameters
    {
        name = n;
        movieIncome = t;
        firstWeekendIncome = f;
        distributor = d; ✓✓ assigned correctly

    //1.5.1 [3]
        releaseDate = LocalDate.parse✓ (rD,DateTimeFormatter.ofPattern✓
            ("MMM dd yyyy"))✓;

    //1.5.2 [1]
        movieCount++; ✓

    //1.7.5 [3]
        totalIncome = totalIncome✓ + convertIncome✓ (movieIncome) ✓;
    } // end constructor

    //1.6 [4]
    public static double getTotalIncome()✓
    {
        return totalIncome; ✓
    }

    public static int getMovieCount()✓
    {
        return movieCount; ✓
    }
}

```

```

//1.7 [1]
//1.7.1 [1]
    private double✓ convertIncome(String income) ✓
    {
//1.7.2 [2]
        String inc = income.substring✓ (1); ✓
//1.7.3 [6]
        while ✓ (inc.contains(",")✓) accept indexOf("'"')>0
        {
            int pos = inc.indexOf(",");✓
            String temp1 = inc.substring(0,pos); ✓
            String temp2 = inc.substring(pos+1); ✓
            inc = temp1 + temp2; ✓
        } // end while
//1.7.4 [2]
        return✓ Double.parseDouble(inc) ✓;
    }

//1.8 [5]
    public int getMonths()
    {
        Period✓ diff = Period.between✓ (releaseDate✓, LocalDate.now()✓);
        return diff.getMonths()✓;
    } // end getMonths

//1.9 [6]
    public double calcFirstWeekendPerc ()
    {
        double weekendInc = convertIncome(firstWeekendIncome) ✓;
        double incPerc = weekendInc / ✓convertIncome(movieIncome) * 100✓;
        incPerc = Math.round✓ (incPerc*100) / 100.0✓;

        return incPerc; ✓
    }

//3.1 [1]
    public String generateCode()✓
    {
        String code = "";
        char prev, curr;
//3.1.1 [1]
        name = name.toUpperCase();✓
        String temp = name;

```

//3.1.2 [4]

```

if (temp.contains(" ")✓==false) ✓ accept any correct  
alternate method
{
    code = "" + temp.charAt(0) ✓;
    code = code + temp.charAt(temp.length()-1); ✓
} // end if
else

```

//3.1.3 [8]

```

{
    temp = " " + name; ✓ insert space for processing of first word  
accept other valid solutions for processing  
of first word.
    for (int i = 1✓; i < temp.length()✓; i++) accept Scanner to  
isolate words
    {
        prev = temp.charAt(i - 1); ✓
        curr = temp.charAt(i); ✓
        if (Character.isLetter(prev)==false✓ &&  
            Character.isLetter(curr)==true✓)

```

Test if current character is a letter and previous letter is a space. Any valid test for a space followed by a letter.

```

        {
            code = code + temp.charAt(i) ✓;
        } // end if
    }
} // end else

```

//3.1.4 [5]

```

int rand = (int) ✓ (Math.random()✓*(99-20+1) ✓)+20✓;
code = code + rand; ✓

return code;

}

```

```

@Override
public String toString()
{

```

```

    String temp;

```

//3.2 [1]

```

    temp = generateCode()✓;

```

//1.10 [7]

```

temp = temp + " " + name.toUpperCase();✓
temp = temp + "\n\tMonths since release: " + getMonths();✓
temp = temp + "\n\tDistributor: " + distributor; ✓
temp = temp + "\n\tTotal Movie Income in 2022: " + movieIncome✓ +
    "\n\tFirst-Weekend Income: " + firstWeekendIncome✓ +
    "\n\tPercentage of Movie Income: " +
        calcFirstWeekendPerc() + "%";✓

return temp; ✓

```

```

} // end toString

```

```

}

```

QUESTION 2

24 MARKS

```
import java.util.*;
import java.io.*;
import java.time.LocalDate;
import java.time.format.DateTimeFormatter;
```

//2.1 [1]

```
public class MovieUI ✓
{
    public static void main (String[] args)
    {
```

//2.2.1 [4]

```
    try //try, catch with error message ✓✓
    {
        String line, name, total, first, dist, rDate;

        Scanner scFile = new Scanner(new File("movies.txt")) ✓;

        while (scFile.hasNextLine()) ✓
        {
```

//2.2.2 [5]

```
            line = scFile.nextLine(); ✓
            Scanner scLine = new Scanner(line) ✓.useDelimiter("#") ✓;
            name = scLine.next();
            total = scLine.next(); ✓✓correct splitting line into fields
            first = scLine.next();
            rDate = scLine.next();
            dist = scLine.next();
```

//2.2.3 [5]

```
            switch ✓ (dist ✓)
            {
                case Movie.UNIVERSAL: ✓correct use of constant fields
                    dist = "UNV"; ✓correct case statements & breaks
                    break; ✓correct assignment of codes
                case Movie.UNITED:
                    dist = "UNT";
                    break;
                case Movie.STERKINEKOR:
                    dist = "STK";
                    break;
                default:
                    dist = "OTHER";
            } // end switch
```

//2.2.4 [3]

```
            Movie myMovie ✓ = new Movie ✓ (name, total, first,
                                            rDate, dist) ✓;
```

//2.2.5 [2]

```
            System.out.println ✓ (myMovie ✓);
            scLine.close();
        } // end while
        scFile.close();
```

//2.3 [4]

```
            System.out.println("Total Income: " ✓ + Movie.getTotalIncome() ✓);
            System.out.println("No. of Movies: " ✓ + Movie.getMovieCount() ✓);
        } // end try
```

```
catch (FileNotFoundException e)
{
    System.out.println("File not found.");
} // end catch
} // end main
} // end class
```

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