**ASSIGNMENT 2**

**SET A**

1. **Write a Java program to Copy data of one object to another Object.**

public class CopyClass {

    int id;

    String name;

    CopyClass(int id,String name){

        this.id=id;

        this.name=name;

    }

    CopyClass(CopyClass obj){

        System.out.println("const called for copying");

        this.id=obj.id;

        this.name=obj.name;

    }

    public static void main(String args[]) {

        CopyClass obj1= new CopyClass(10,"Java");

        System.out.println("obj1 id="+obj1.id);

        System.out.println("ojb1 name="+obj1.name);

        CopyClass obj2= new CopyClass(obj1);

        System.out.println("obj2 id="+obj2.id);

        System.out.println("obj2 name="+obj2.name);

    }

}

Output:

obj1 id = 10

obj1 name = Java

const called for copying

obj2 id = 10

obj2 name = Java

1. **Write a Java program create class as MyDate with dd,mm,yy as data members. Write default and parameterized constructor. Display the date in dd-mm-yy format.(Use this keyword)**

class MyDate {

int day,mon,yr;

MyDate() {

day=1;

mon=1;

yr=2000;

}

MyDate(int day,int mon, int yr) {

this.day= day;

this.mon = mon;

this.yr = yr;

}

void DisplayDate() {

System.out.println(day+"-"+mon+"-"+yr);

}

}

public class Dateform {

public static void main (String args[]) {

MyDate md= new MyDate(01,12,2003);

md.DisplayDate();

}

}

Output:

1-12-2003

=== Code Execution Successful ===

1. **Write a java program which defines a class teacher with data members as id,name,designation and salary.**

public class Teacher {

int id;

String name;

String designation;

double salary;

public Teacher(int id, String name, String designation, double salary) {

this.id = id;

this.name = name;

this.designation = designation;

this.salary = salary;

}

public void displayDetails() {

System.out.println("Teacher ID: " + id);

System.out.println("Teacher Name: " + name);

System.out.println("Teacher Designation: " + designation);

System.out.println("Teacher Salary: " + salary);

}

public static void main(String[] args) {

Teacher teacher1 = new Teacher(101, "Patil Sir", "Professor", 500000.0);

teacher1.displayDetails();

}

}

Output:

Teacher ID: 101

Teacher Name: Patil Sir

Teacher Designation: Professor

Teacher Salary: 500000.0

1. **Write a program that stores the information of 5 Employees. (Use array of object)**

import java.util.Scanner;

class Employee {

String name;

int id;

String designation;

double salary;

Employee(String name, int id, String designation, double salary) {

this.name = name;

this.id = id;

this.designation = designation;

this.salary = salary;

}

void display() {

System.out.println("Employee ID: " + id);

System.out.println("Employee Name: " + name);

System.out.println("Employee Designation: " + designation);

System.out.println("Employee Salary: " + salary);

System.out.println();

}

}

public class EmployeeInfo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

Employee[] employees = new Employee[5];

for (int i = 0; i < 5; i++) {

System.out.println("Enter details for Employee " + (i + 1) + ":");

System.out.print("Enter ID: ");

int id = sc.nextInt();

sc.nextLine();

System.out.print("Enter Name: ");

String name = sc.nextLine();

System.out.print("Enter Designation: ");

String designation = sc.nextLine();

System.out.print("Enter Salary: ");

double salary = sc.nextDouble();

employees[i] = new Employee(name, id, designation, salary);

}

System.out.println("\nEmployee Details:");

for (int i = 0; i < 5; i++) {

employees[i].display();

}

}

}

Output:

Enter details for Employee 1:

Enter ID: 1

Enter Name: Ashish

Enter Designation: Manager

Enter Salary: 50000

Enter details for Employee 2:

Enter ID: 2

Enter Name: krishna

Enter Designation: Manager

Enter Salary: 50000

Enter details for Employee 3:

Enter ID: 3

Enter Name: Ramesh

Enter Designation: salesman

Enter Salary: 35000

Enter details for Employee 4:

Enter ID: 4

Enter Name: Radhika

Enter Designation: project Manager

Enter Salary: 45000

Enter details for Employee 5:

Enter ID: 5

Enter Name: Madan

Enter Designation: salesman

Enter Salary: 38000

Employee Details:

Employee ID: 1

Employee Name: Ashish

Employee Designation: Manager

Employee Salary: 50000.0

Employee ID: 2

Employee Name: krishna

Employee Designation: Manager

Employee Salary: 50000.0

Employee ID: 3

Employee Name: Ramesh

Employee Designation: salesman

Employee Salary: 35000.0

Employee ID: 4

Employee Name: Radhika

Employee Designation: project Manager

Employee Salary: 45000.0

Employee ID: 5

Employee Name: Madan

Employee Designation: salesman

Employee Salary: 38000.0

=== Code Execution Successful ===

1. **Write a Java program to convert all the characters in a string to Uppercase and vice versa.**

import java.util.Scanner;

public class CaseConversion {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter a string: ");

String input = sc.nextLine();

// Convert to Uppercase

String upperCaseString = input.toUpperCase();

System.out.println("Uppercase: " + upperCaseString);

// Convert to Lowercase

String lowerCaseString = input.toLowerCase();

System.out.println("Lowercase: " + lowerCaseString);

// Toggle case

StringBuilder toggledString = new StringBuilder();

for (int i = 0; i < input.length(); i++) {

char ch = input.charAt(i);

if (Character.isLowerCase(ch)) {

toggledString.append(Character.toUpperCase(ch));

} else {

toggledString.append(Character.toLowerCase(ch));

}

}

System.out.println("Toggled case: " + toggledString.toString());

}

}

Output:

Enter a string: Ramesh IS good at COoking

Uppercase: RAMESH IS GOOD AT COOKING

Lowercase: ramesh is good at cooking

Toggled case: rAMESH is GOOD AT coOKING

=== Code Execution Successful ===

**SET C**

1. **Define a class Student with attributes roll no and name. Define default and parameterized constructor. Keep the count of Objects created. Create objects using parameterized constructor and display the object count after each object is created.**

class Student {

int rollNo;

String name;

static int count = 0;

Student() {

rollNo = 0;

name = "";

count++;

}

Student(int rollNo, String name) {

this.rollNo = rollNo;

this.name = name;

count++;

}

void display() {

System.out.println("Roll No: " + rollNo);

System.out.println("Name: " + name);

}

static void displayCount() {

System.out.println("Total Students Created: " + count);

}

}

public class StudentDemo {

public static void main(String[] args) {

Student student1 = new Student(101, "John");

student1.display();

Student.displayCount();

Student student2 = new Student(102, "Alice");

student2.display();

Student.displayCount();

Student student3 = new Student(103, "Bob");

student3.display();

Student.displayCount();

Student student4 = new Student();

student4.display();

Student.displayCount();

}

}

Output:

Roll No: 101

Name: John

Total Students Created: 1

Roll No: 102

Name: Alice

Total Students Created: 2

Roll No: 103

Name: Bob

Total Students Created: 3

Roll No: 0

Name:

Total Students Created: 4

=== Code Execution Successful ===

1. **Write a java program to accept n employee names from user. Sort them in ascending order and Display them.(Use array of object and Static keyword)**

import java.util.\*;

class SortName

{

static String[] str=new String[5];

static Scanner sc=new Scanner(System.in);

static ArrayList<String>list=new ArrayList<String>();

public static void main(String args[])

{

for(int i=0; i<str.length; i++)

{

System.out.print("Please insert employee name " + (i + 1) + " :");

str[i]=sc.next();

list.add(str[i]);

}

Collections.sort(list);

System.out.println(list);

}

}

Output:

Please insert employee name 1 :Rohini

Please insert employee name 2 :Rahul

Please insert employee name 3 :Om

Please insert employee name 4 :Ram

Please insert employee name 5 :Shyam

[Om, Rahul, Ram, Rohini, Shyam]

=== Code Execution Successful ===

1. **Write a Java program to check occurrences of the specified letter in the given string (accept both values from the user).**

import java.util.Scanner;

public class LetterOccurrence {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

// Input the string from the user

System.out.print("Enter a string: ");

String inputString = sc.nextLine();

// Input the character to check for

System.out.print("Enter the character to find occurrences: ");

char targetChar = sc.next().charAt(0);

// Initialize the count variable to zero

int count = 0;

// Loop through each character of the string

for (int i = 0; i < inputString.length(); i++) {

// Check if the current character matches the target character

if (inputString.charAt(i) == targetChar) {

count++;

}

}

// Output the result

System.out.println("The character '" + targetChar + "' occurs " + count + " times in the string.");

}

}

Output:

Enter a string: programming

Enter the character to find occurrences: m

The character 'm' occurs 2 times in the string.

=== Code Execution Successful ===

1. **Program to Convert Temperature from Celsius to Fahrenheit & Fahrenheit to Celsius Using Constructor.**

import java.util.Scanner;

class TemperatureConverter {

double temperature;

TemperatureConverter(double celsius) {

temperature = celsius \* 9/5 + 32;

System.out.println(celsius + "°C = " + temperature + "°F");

}

TemperatureConverter(int dummy, double fahrenheit) {

temperature = (fahrenheit - 32) \* 5/9;

System.out.println(fahrenheit + "°F = " + temperature + "°C");

}

}

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter temperature in Celsius: ");

double celsius = sc.nextDouble();

new TemperatureConverter(celsius);

System.out.print("Enter temperature in Fahrenheit: ");

double fahrenheit = sc.nextDouble();

new TemperatureConverter(0, fahrenheit);

}

}

Output:

Enter temperature in Celsius: 25

25.0?C = 77.0?F

Enter temperature in Fahrenheit: 77

77.0?F = 25.0?C

=== Code Execution Successful ===