Sheet 5

Qn 4 import java.util.Scanner;

public class InputDisplay {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter your name: ");

String name = scanner.next();

System.out.print("Enter your age: ");

int age = scanner.nextInt();

scanner.nextLine();

System.out.print("Enter your height in meters (e.g., 1.75): ");

double height = scanner.nextDouble();

scanner.nextLine();

System.out.print("Describe yourself: ");

String des = scanner.nextLine();

System.out.println("\nYou entered:");

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

System.out.println("Age: " + age);

System.out.println("Height: " + height + " meters");

System.out.println("Description: " + des);

}

}

Qn 5

import java.util.Scanner;

public class StringOperations {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

// Input for inserting string

System.out.print("Enter the original string: ");

String original = scanner.nextLine();

System.out.print("Enter the string to insert: ");

String toInsert = scanner.nextLine();

System.out.print("Enter the position to insert at (0-indexed): ");

int position = scanner.nextInt();

// (a) Insert a string into another string at specified position

String insertedString = insertString(original, toInsert, position);

System.out.println("String after insertion: " + insertedString);

// Input for concatenation

scanner.nextLine(); // Clear the buffer

System.out.print("Enter another string for concatenation: ");

String secondString = scanner.nextLine();

// (b) Concatenation of two strings

String concatenatedString = original.concat(secondString);

System.out.println("Concatenated string: " + concatenatedString);

// Input for comparison

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

String stringToCompare = scanner.nextLine();

// (c) Comparison of two strings

int comparisonResult = original.compareTo(stringToCompare);

if (comparisonResult == 0) {

System.out.println("The strings are equal.");

} else if (comparisonResult < 0) {

System.out.println("The original string is less than the compared string.");

} else {

System.out.println("The original string is greater than the compared string.");

}

// Input for searching last occurrence

System.out.print("Enter a character or substring to search for its last occurrence: ");

String searchString = scanner.nextLine();

// (d) Search the last occurrence of a character or substring

int lastIndex = original.lastIndexOf(searchString);

if (lastIndex != -1) {

System.out.println("Last occurrence of '" + searchString + "' is at index: " + lastIndex);

} else {

System.out.println("Substring not found.");

}

// Input for removing whitespace

System.out.print("Enter a string with leading and trailing spaces: ");

String spaceString = scanner.nextLine();

// (e) Remove leading and trailing white spaces in a string

String trimmedString = spaceString.trim();

System.out.println("String after trimming: '" + trimmedString + "'");

// Close the scanner

scanner.close();

}

// Method to insert a string into another string at a specified position

private static String insertString(String original, String toInsert, int position) {

if (position < 0 || position > original.length()) {

System.out.println("Invalid position. Insertion will not be performed.");

return original;

}

return original.substring(0, position) + toInsert + original.substring(position);

}

}

Qn 3.

import java.util.\*;

class Student

{

String name;

float per;

int roll=0;

static void Sortstudent(int n,Student[] x)

{

for(int i=0;i<n-1;i++)

{

for(int j=0;j<n-i-1;j++)

{

if (x[i].per>x[i+1].per)

{

Student t=x[i];

x[i]=x[i+1];

x[i+1]=t;

}

}

}

}

static void display(int n,Student[] x)

{

System.out.println("\nDetails of Students based on ascending order of percentage: ");

for(int i=0;i<n;i++)

{

System.out.println("Name: "+x[i].name);

System.out.println("RollNo: "+x[i].roll);

System.out.println("Percentage: "+x[i].per);

}

}

}

class Main

{

public static void main(String[] args)

{

Scanner s=new Scanner(System.in);

System.out.println("Enter the required Number of Students: ");

int n=s.nextInt();

s.nextLine();

Student[] x=new Student[n];

for(int i=0;i<n;i++)

{

x[i]=new Student();

System.out.println("Details of Student "+(i+1));

x[i].roll=i+1;

System.out.println("Enter your Name: ");

x[i].name=s.nextLine();

System.out.println("Enter Percentage of your score: ");

x[i].per=s.nextFloat();

s.nextLine();

}

Student.Sortstudent(n,x);

Student.display(n,x);

}

}