

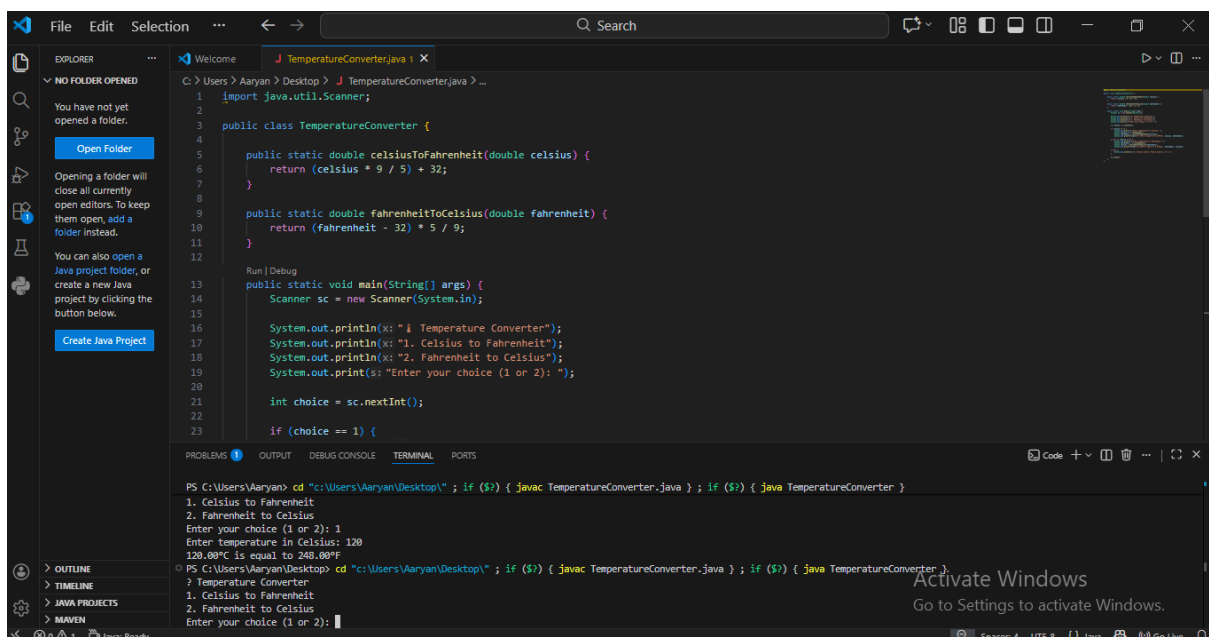
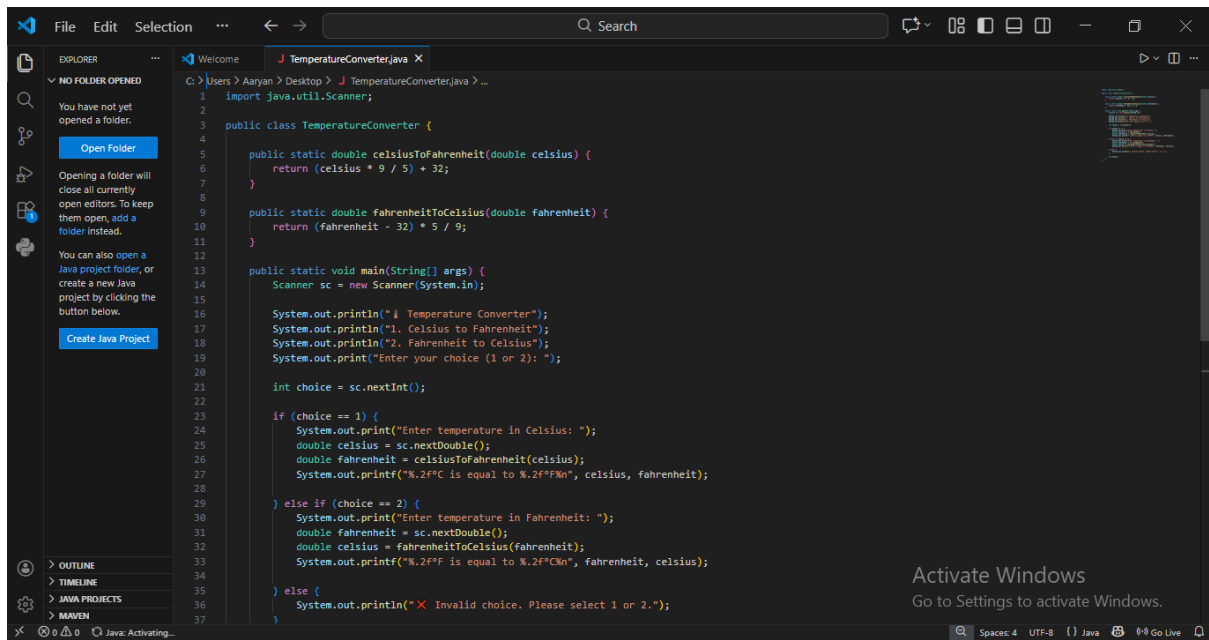
Cognifyz Level 1 Tasks :-

Task 1 :-

Task: Temperature Converter

Description: Create a program that converts temperatures between Celsius and Fahrenheit. Prompt the user to enter a temperature value and the unit of measurement, and then perform the conversion. Display the converted temperature.

Skills: Basic input/output operations, arithmetic operations.

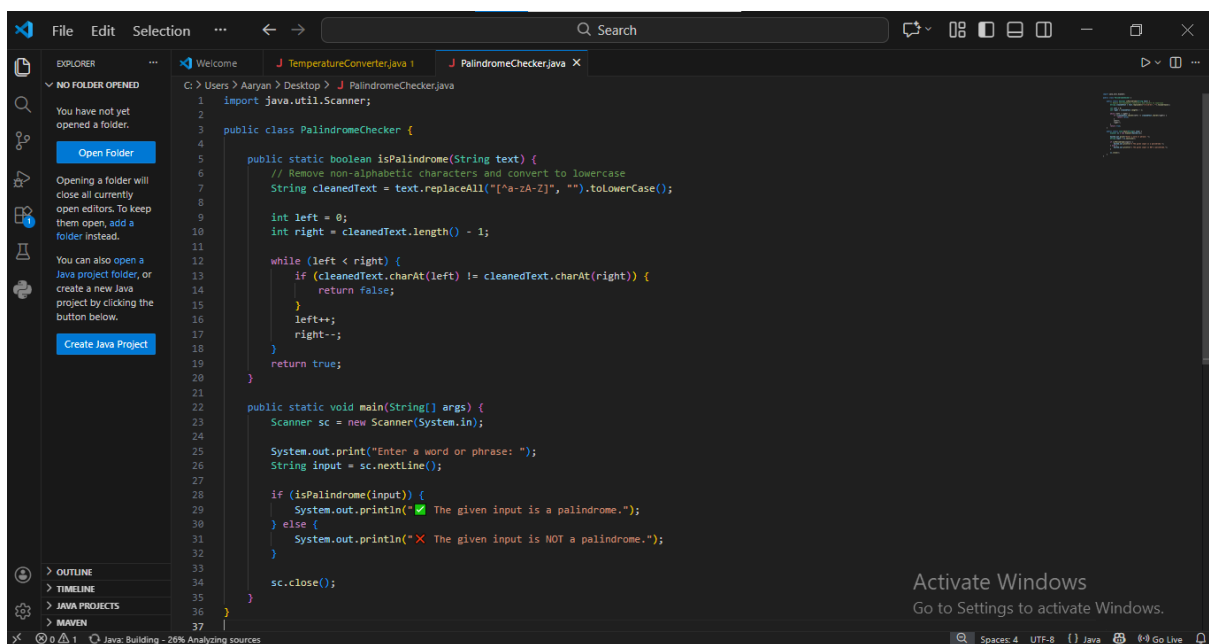


Task2

Task: Palindrome Checker

Description: Implement a program that checks whether a given word or phrase is a palindrome. A palindrome is a word or phrase that reads the same forwards and backward, ignoring spaces and punctuation.

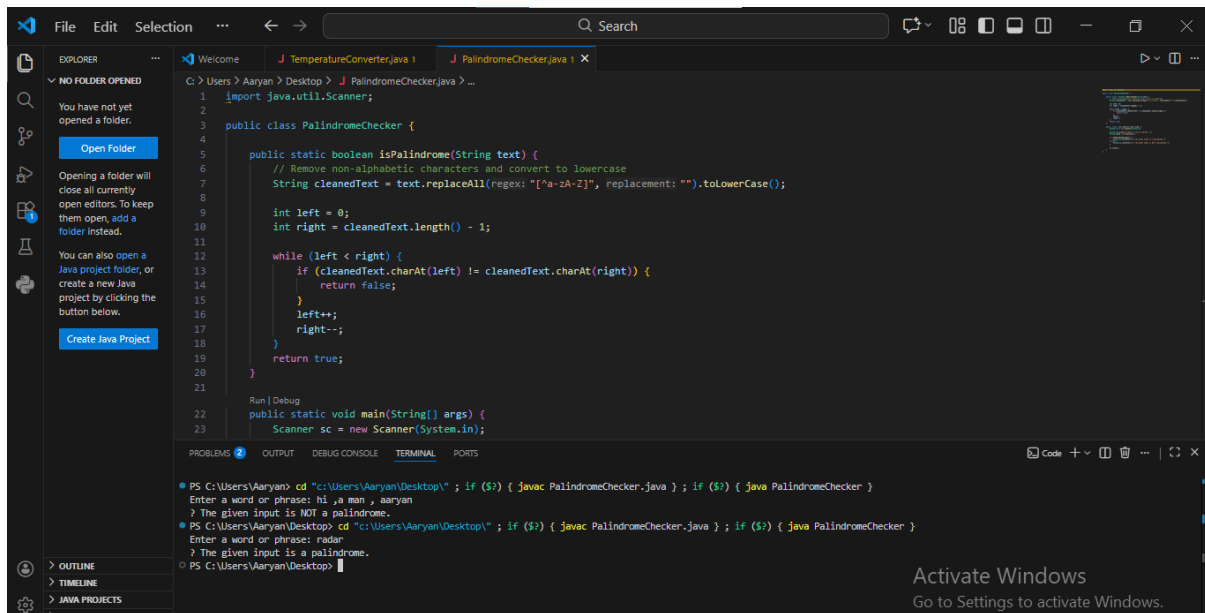
Skills: String manipulation, loops, conditional statements.



The screenshot shows an IDE with a Java project named 'PalindromeChecker'. The main file, 'PalindromeChecker.java', contains the following code:

```
1 import java.util.Scanner;
2
3 public class PalindromeChecker {
4
5     public static boolean isPalindrome(String text) {
6         // Remove non-alphabetic characters and convert to lowercase
7         String cleanedText = text.replaceAll("[^a-zA-Z]", "").toLowerCase();
8
9         int left = 0;
10        int right = cleanedText.length() - 1;
11
12        while (left < right) {
13            if (cleanedText.charAt(left) != cleanedText.charAt(right)) {
14                return false;
15            }
16            left++;
17            right--;
18        }
19        return true;
20    }
21
22    public static void main(String[] args) {
23        Scanner sc = new Scanner(System.in);
24
25        System.out.print("Enter a word or phrase: ");
26        String input = sc.nextLine();
27
28        if (isPalindrome(input)) {
29            System.out.println("✅ The given input is a palindrome.");
30        } else {
31            System.out.println("❌ The given input is NOT a palindrome.");
32        }
33
34        sc.close();
35    }
36
37 }
```

The IDE interface includes a sidebar with 'EXPLORER' and 'OUTLINE' tabs, and a status bar at the bottom indicating 'Java: Building - 26% Analyzing sources'.

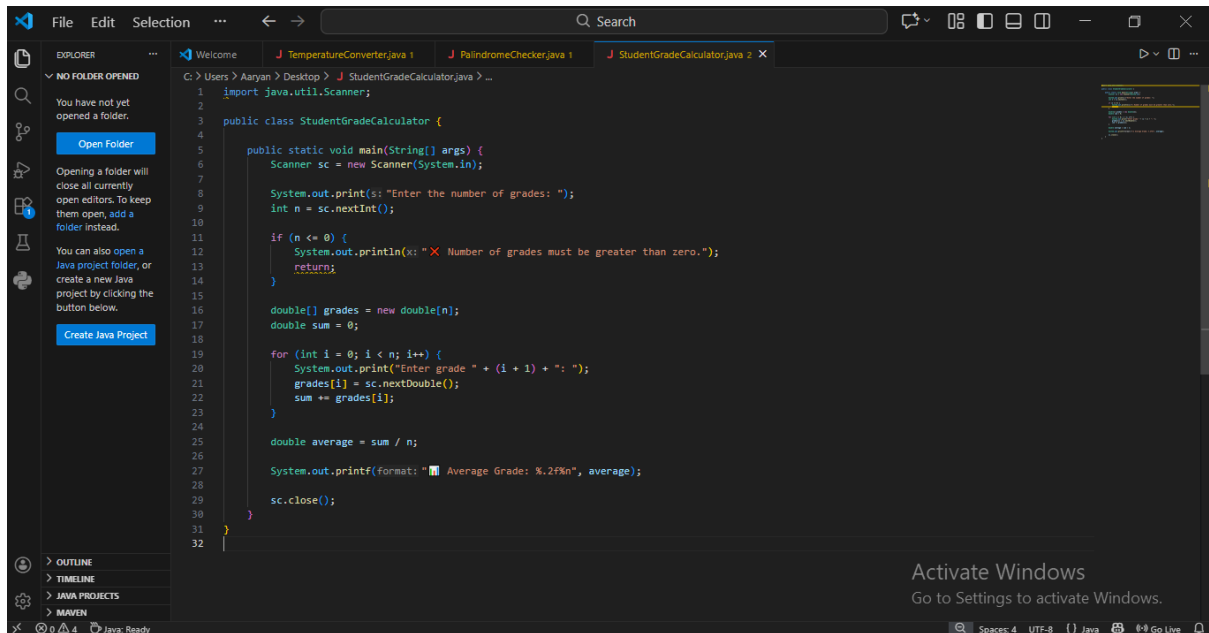


Task3

Task: Student Grade Calculator

Description: create a program that calculates and displays the average grade of a student. Prompt the user to enter the number of grades to be entered, and then input each grade. Calculate the average and display it to the user.

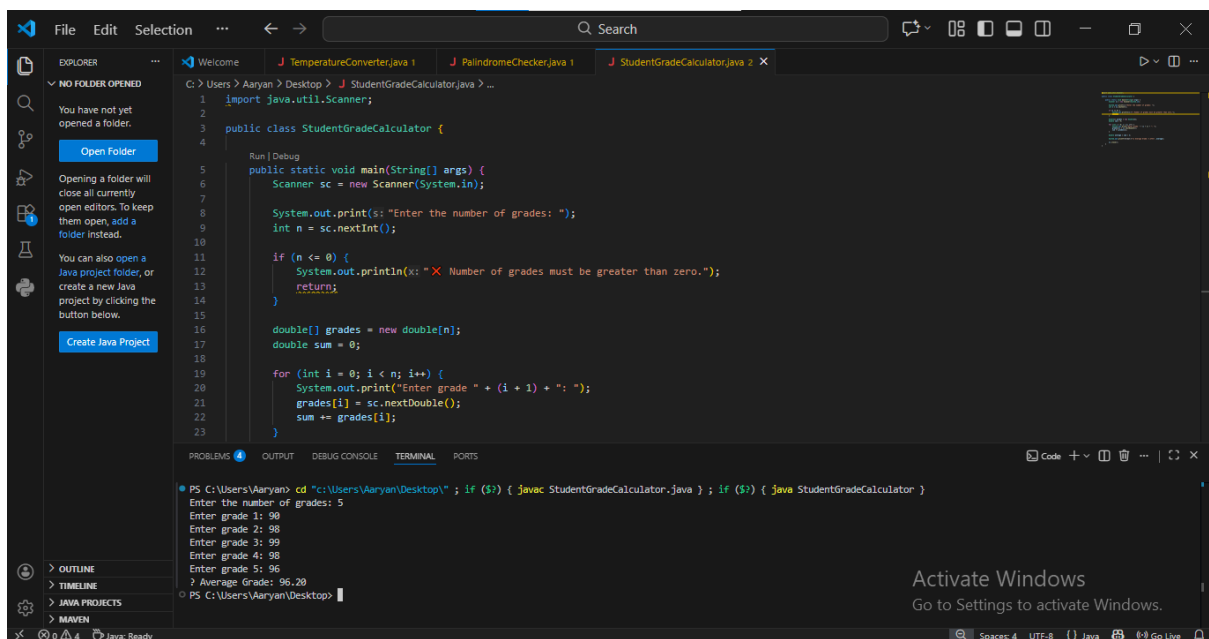
Skills: Loops, arrays, basic arithmetic operations.



The screenshot shows an IDE with the file `StudentGradeCalculator.java` open. The code is as follows:

```
1 import java.util.Scanner;
2
3 public class StudentGradeCalculator {
4
5     public static void main(String[] args) {
6         Scanner sc = new Scanner(System.in);
7
8         System.out.print(s: "Enter the number of grades: ");
9         int n = sc.nextInt();
10
11         if (n <= 0) {
12             System.out.println(x: "X Number of grades must be greater than zero.");
13             return;
14         }
15
16         double[] grades = new double[n];
17         double sum = 0;
18
19         for (int i = 0; i < n; i++) {
20             System.out.print("Enter grade " + (i + 1) + ": ");
21             grades[i] = sc.nextDouble();
22             sum += grades[i];
23         }
24
25         double average = sum / n;
26
27         System.out.printf(format: "% Average Grade: %.2f\n", average);
28
29         sc.close();
30     }
31 }
32
```

The IDE interface includes a sidebar with 'EXPLORER' and 'OUTLINE' tabs, and a bottom status bar showing 'Java: Ready'.



The screenshot shows the same IDE with the `StudentGradeCalculator.java` file open. The 'TERMINAL' tab is active, displaying the output of the program:

```
PS C:\Users\Aaryan> cd "C:\Users\Aaryan\Desktop\"; if ($?) { javac StudentGradeCalculator.java }; if ($?) { java StudentGradeCalculator }
Enter the number of grades: 5
Enter grade 1: 98
Enter grade 2: 98
Enter grade 3: 99
Enter grade 4: 98
Enter grade 5: 96
? Average Grade: 96.20
PS C:\Users\Aaryan\Desktop>
```

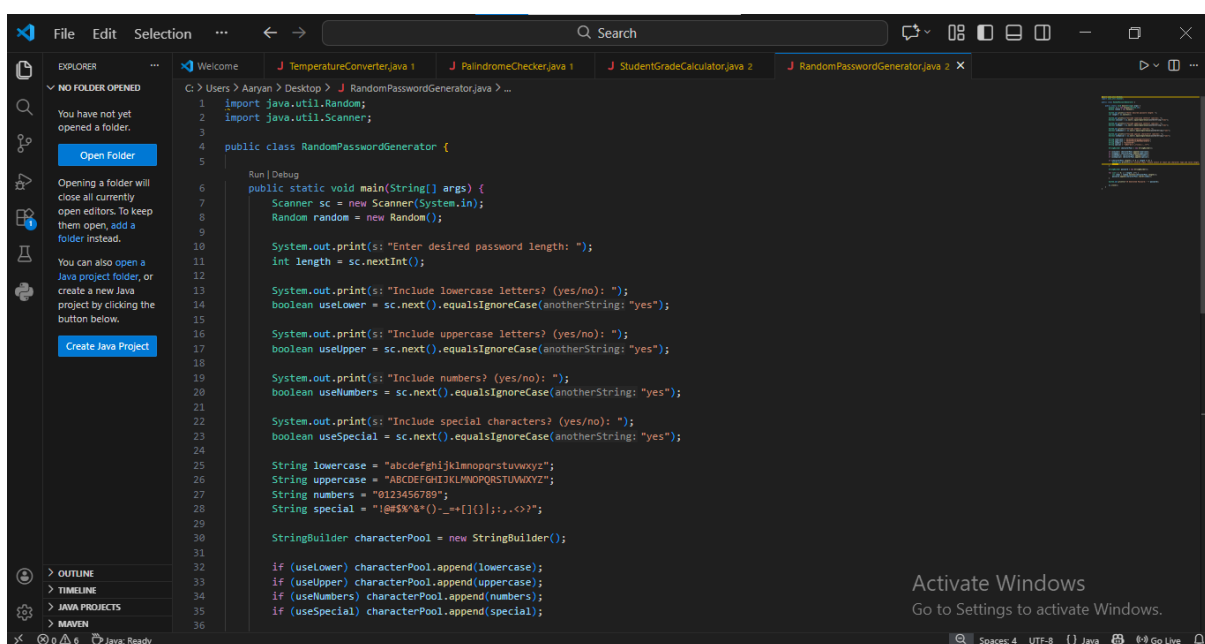
The IDE interface also shows the 'PROBLEMS' and 'OUTPUT' tabs, and the bottom status bar remains 'Java: Ready'.

Task4

Task: Random Password Generator

Description: Build a program that generates a random password for the user. Prompt the user to enter the desired length of the password and specify whether it should include numbers, lowercase letters, uppercase letters, and special characters. Generate the password accordingly and display it to the user.

Skills: Random number generation, string manipulation, user input.



The screenshot shows an IDE with a Java project named 'RandomPasswordGenerator.java'. The code is as follows:

```
1 import java.util.Random;
2 import java.util.Scanner;
3
4 public class RandomPasswordGenerator {
5
6     Run | Debug
7     public static void main(String[] args) {
8         Scanner sc = new Scanner(System.in);
9         Random random = new Random();
10
11         System.out.print(s: "Enter desired password length: ");
12         int length = sc.nextInt();
13
14         System.out.print(s: "Include lowercase letters? (yes/no): ");
15         boolean useLower = sc.next().equalsIgnoreCase("yes");
16
17         System.out.print(s: "Include uppercase letters? (yes/no): ");
18         boolean useUpper = sc.next().equalsIgnoreCase("yes");
19
20         System.out.print(s: "Include numbers? (yes/no): ");
21         boolean useNumbers = sc.next().equalsIgnoreCase("yes");
22
23         System.out.print(s: "Include special characters? (yes/no): ");
24         boolean useSpecial = sc.next().equalsIgnoreCase("yes");
25
26         String lowercase = "abcdefghijklmnopqrstuvwxyz";
27         String uppercase = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";
28         String numbers = "0123456789";
29         String special = "!@#$%^&*()-_+=[]{}|;:,.<?>";
30
31         StringBuilder characterPool = new StringBuilder();
32
33         if (useLower) characterPool.append(lowercase);
34         if (useUpper) characterPool.append(uppercase);
35         if (useNumbers) characterPool.append(numbers);
36         if (useSpecial) characterPool.append(special);
```

