Lab Worksheet 01

CTEC 22043 Object Oriented Programming

Faculty of Computing and Technology

University of Kelaniya

Student Number – CT/2021/065

Q1.

Code

package Q\_01;  
import javax.swing.\*;  
  
public class Q\_01 {  
 public static void main(String[] args) {  
 JFrame myWindow;  
 myWindow = new JFrame();  
 myWindow.setSize(800, 600);  
 myWindow.setTitle("Welcome to Java");  
 myWindow.setVisible(true);  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q2.

Code

package Q\_02;  
  
import javax.swing.\*;  
import java.util.Scanner;  
  
public class Q\_02 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.println("Enter First Name: ");  
 String firstName = scanner.next();  
 System.*out*.println("Enter Last Name: ");  
 String lastName = scanner.next();  
 JFrame frame = new JFrame();  
 frame.setSize(800,600);  
 frame.setTitle(firstName+" "+lastName);  
 frame.setVisible(true);  
 frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q3.

Code

package Q\_03;  
  
import java.util.Scanner;  
  
public class Q\_03 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.println("Enter First Name: ");  
 String firstName = scanner.next();  
 System.*out*.println("Enter Middle Name: ");  
 String middleName = scanner.next();  
 System.*out*.println("Enter Last Name: ");  
 String lastName = scanner.next();  
 String Name = firstName + " " + middleName.toUpperCase().charAt(0) + ". " + lastName;  
 System.*out*.println(Name);  
 }  
}

Output

A screen shot of a computer

AI-generated content may be incorrect.

Q4.

Code

package Q\_04;  
  
import java.time.LocalDate;  
import java.time.format.DateTimeFormatter;  
  
public class Q\_04 {  
 public static void main(String[] args) {  
 // Get today's date  
 LocalDate today = LocalDate.*now*();  
  
 // Define the date format  
 DateTimeFormatter formatter = DateTimeFormatter.*ofPattern*("d MMM yyyy");  
  
 // Format and display the date  
 String formattedDate = today.format(formatter);  
 System.*out*.println("Today's date: " + formattedDate);  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q5.

Code

package Q\_05;  
  
import java.time.LocalDate;  
import java.time.format.DateTimeFormatter;  
  
public class Q\_05 {  
 public static void main(String[] args) {  
 // Get today's date  
 LocalDate today = LocalDate.*now*();  
  
 // Define the date format  
 DateTimeFormatter formatter = DateTimeFormatter.*ofPattern*("EEEE, MMMM d, yyyy");  
  
 // Format and display the date  
 String formattedDate = today.format(formatter);  
 System.*out*.println("Today's date: " + formattedDate);  
 }  
}

Output

A black screen with white text

AI-generated content may be incorrect.

Q6.

Code

package Q\_06;  
  
import javax.swing.\*;  
import java.util.Scanner;  
  
public class Q\_06 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.println("Enter Frame Width: ");  
 int width = Integer.*parseInt*(scanner.next());  
 System.*out*.println("Enter Frame Height: ");  
 int height = Integer.*parseInt*(scanner.next());  
  
 System.*out*.println("Enter Frame Title: ");  
 String title = scanner.next();  
 JFrame myWindow;  
 myWindow = new JFrame();  
 myWindow.setSize(width, height);  
 myWindow.setTitle(title);  
 myWindow.setVisible(true);  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q7.

Code

package Q\_07;  
  
import javax.swing.\*;  
import java.time.LocalTime;  
import java.time.format.DateTimeFormatter;  
import java.util.Timer;  
import java.util.TimerTask;  
  
public class Q\_07 {  
 public static void main(String[] args) {  
 JFrame frame = new JFrame();  
 frame.setSize(300, 200);  
   
 Timer timer = new Timer(true);  
 timer.scheduleAtFixedRate(new TimerTask() {  
 @Override  
 public void run() {  
 LocalTime now = LocalTime.*now*();  
 DateTimeFormatter formatter = DateTimeFormatter.*ofPattern*("hh:mm:ss a");  
 String formattedTime = now.format(formatter);  
 frame.setTitle(formattedTime);  
 }  
 }, 0, 1000); // Update every 1 second  
  
 // Make frame visible  
 frame.setVisible(true);  
 frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q8.

Code

package Q\_08;  
  
import java.util.Scanner;  
  
public class Q\_08 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.println("Enter a string with ! mark: ");  
 String input = scanner.next();  
  
 String[] texts = input.split("!");  
  
 if (texts.length <= 1) {  
 System.*out*.println("No '!' mark detected.");  
 return;  
 }  
  
 if (texts.length > 2) {  
 System.*out*.println("More than 1 '!' mark detected.");  
 return;  
 }  
 for (String text : texts) {  
 System.*out*.println(text);  
 }  
 }  
}

Output

A screen shot of a computer program

AI-generated content may be incorrect.

Q9.

Code

package Q\_09;  
  
import java.util.Scanner;  
  
public class Q\_09 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.println("Enter text: ");  
 String input = scanner.nextLine();  
  
 int input\_len = input.length();  
  
 System.*out*.println(input\_len);  
 System.*out*.println(input.charAt(0));  
 System.*out*.println(input.charAt(input.length() - 1));  
  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q10.

Code

package Q\_10;  
  
import java.util.Scanner;  
  
public class Q\_10 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 System.*out*.println("Enter text: ");  
 String input = scanner.nextLine();  
  
 int input\_len = input.length();  
  
 if (input\_len % 2 == 0) {  
 System.*out*.println("Even input can not process.");  
 return;  
 }  
 System.*out*.println("Middle Letter: "+input.charAt(input\_len/2 ));  
 }  
}

Output

A screenshot of a computer

AI-generated content may be incorrect.

Q11

Code

package Q\_11;  
  
import java.util.Scanner;  
  
public class Q\_11 {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
  
 System.*out*.print("Enter your full name (First Middle Last): ");  
 String input = scanner.nextLine();  
 scanner.close();  
  
 String[] nameParts = input.split(" ");  
  
 if (nameParts.length < 2) {  
 System.*out*.println("Error: Please enter at least a first and last name.");  
 return;  
 }  
  
 String firstName = nameParts[0];  
 String lastName = nameParts[nameParts.length - 1];  
 String middleInitial = (nameParts.length > 2) ? nameParts[1].charAt(0) + "." : "";  
  
 // Format and display the name  
 System.*out*.println(lastName + ", " + firstName + " " + middleInitial);  
 }  
}

Output

A screen shot of a computer

AI-generated content may be incorrect.Q12

Code

package Q\_12;  
  
import javax.swing.\*;  
  
public class Q\_12 {  
 public static void main(String[] args) {  
 JFrame frame = new JFrame("My First Frame");  
 frame.setSize(300, 200);  
 frame.setLocation(100, 50);  
 frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 frame.setVisible(true);  
 }  
}

Output

