

Worksheet 01

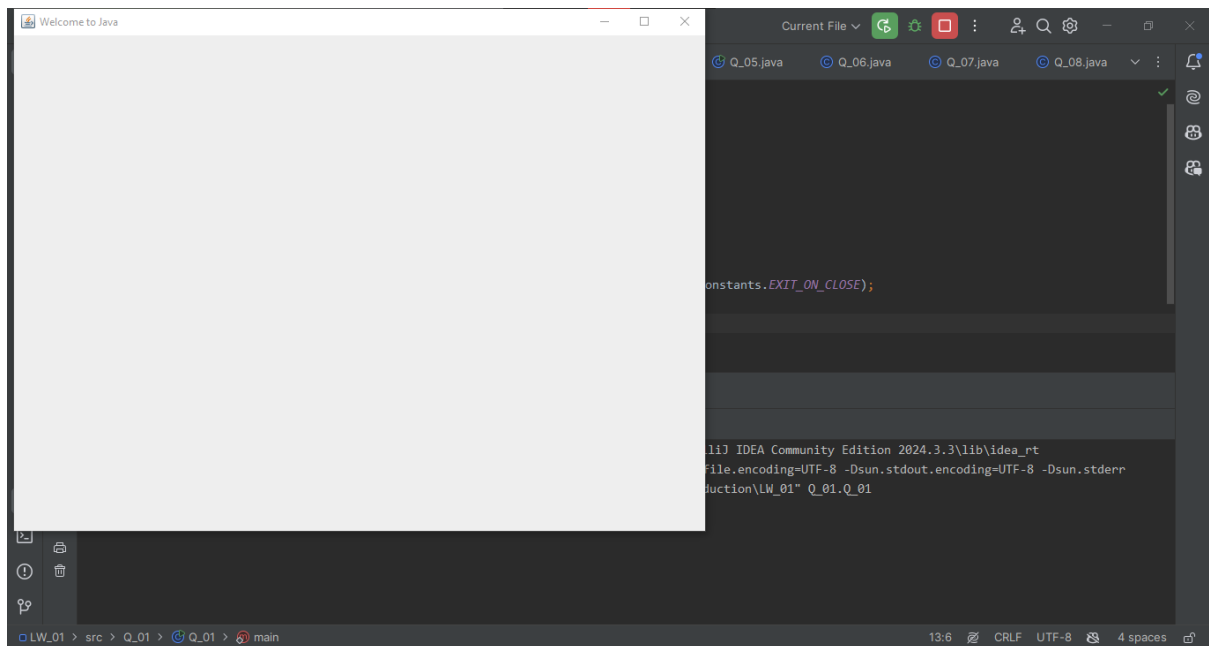
Q01:

Code:

```
package Q_01;
import javax.swing.*;

public class Q_01 {
    public static void main(String[] args) {
        JFrame sampleWindow;
        sampleWindow = new JFrame();
        sampleWindow.setSize(800,600);
        sampleWindow.setTitle("Welcome to Java");
        sampleWindow.setVisible(true);
        sampleWindow.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    }
}
```

Output:



Q02:

Code:

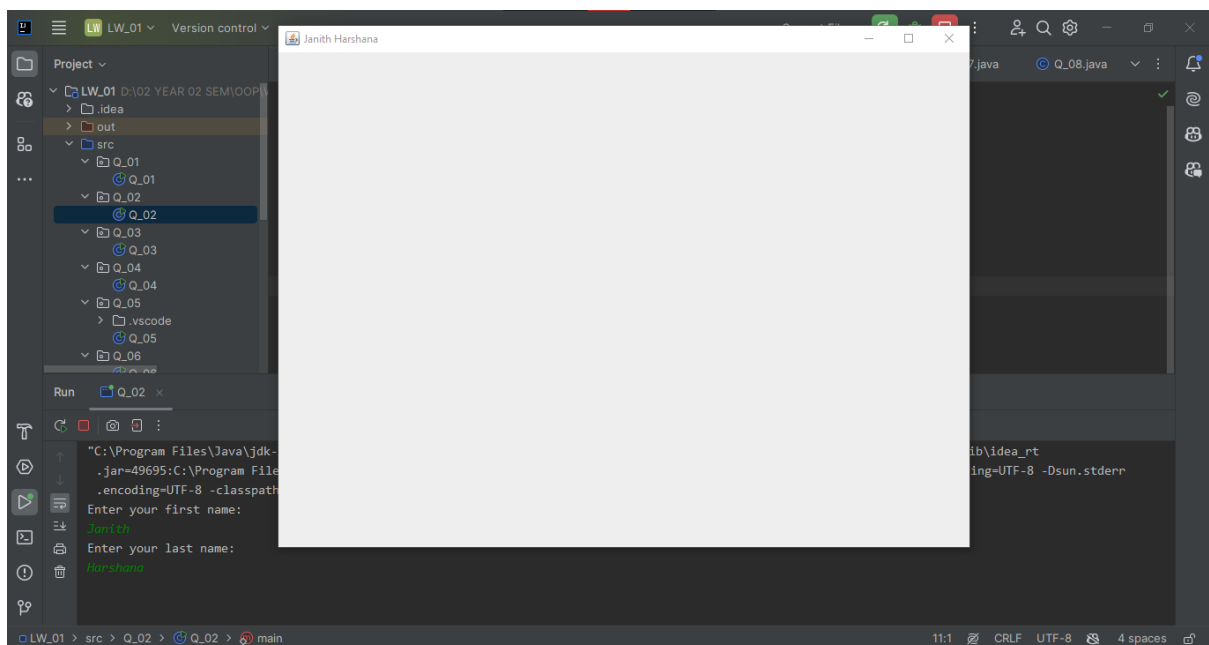
```
package Q_02;
import javax.swing.*;
import java.util.*;

public class Q_02 {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String firstName;
        System.out.println("Enter your first name:");
        firstName = scn.nextLine();

        String lastName;
        System.out.println("Enter your last name:");
        lastName = scn.nextLine();

        JFrame nameWindow;
        nameWindow = new JFrame();
        nameWindow.setSize(800,600);
        nameWindow.setTitle(firstName+" "+lastName);
        nameWindow.setVisible(true);
        nameWindow.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    }
}
```

Output:



Q03:

Code:

```
package Q_03;
import java.util.*;

public class Q_03 {
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        String firstName, middleName, lastName;

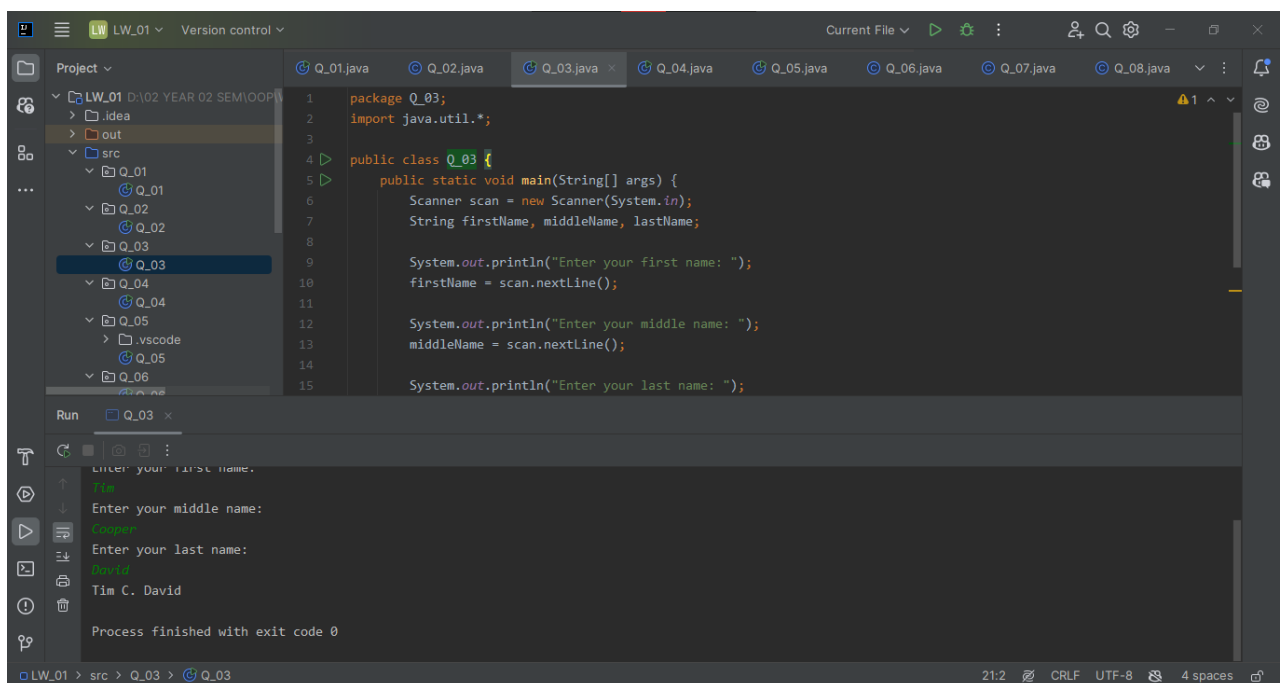
        System.out.println("Enter your first name: ");
        firstName = scan.nextLine();

        System.out.println("Enter your middle name: ");
        middleName = scan.nextLine();

        System.out.println("Enter your last name: ");
        lastName = scan.nextLine();

        System.out.println(firstName+" "+middleName.substring(0,1)+"."+ lastName);
    }
}
```

Output:

The screenshot shows an IDE window with a project named 'LW_01'. The file explorer on the left shows a directory structure with folders 'Q_01' through 'Q_06'. The main editor displays the code for 'Q_03.java', which is the same code as shown in the previous block. Below the editor, the 'Run' console shows the output of the program. The output consists of three prompts: 'Enter your first name:', 'Enter your middle name:', and 'Enter your last name:'. The user has entered 'Tim', 'David', and 'Tim C. David' respectively. The final output line is 'Tim C. David'. The status bar at the bottom indicates the file is 'Q_03' in the 'src' directory of 'LW_01'.

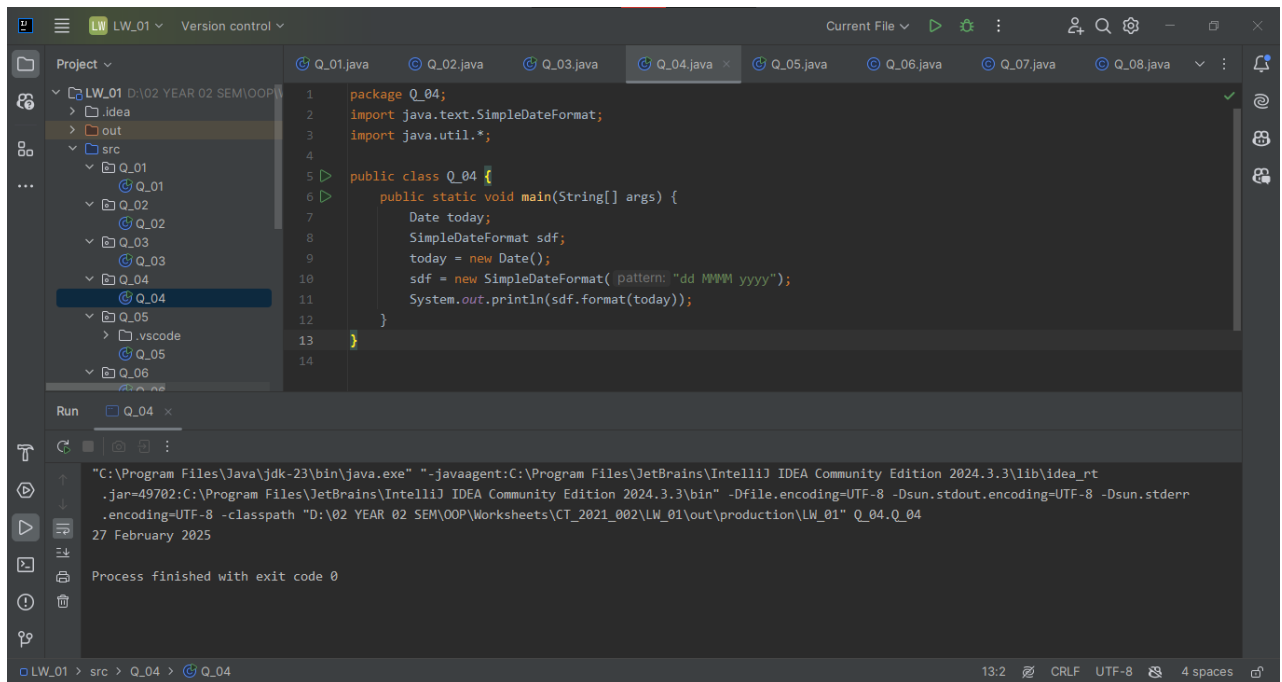
Q 04:

Code:

```
package Q_04;
import java.text.SimpleDateFormat;
import java.util.*;

public class Q_04 {
    public static void main(String[] args) {
        Date today;
        SimpleDateFormat sdf;
        today = new Date();
        sdf = new SimpleDateFormat("dd MMMM yyyy");
        System.out.println(sdf.format(today));
    }
}
```

Output:



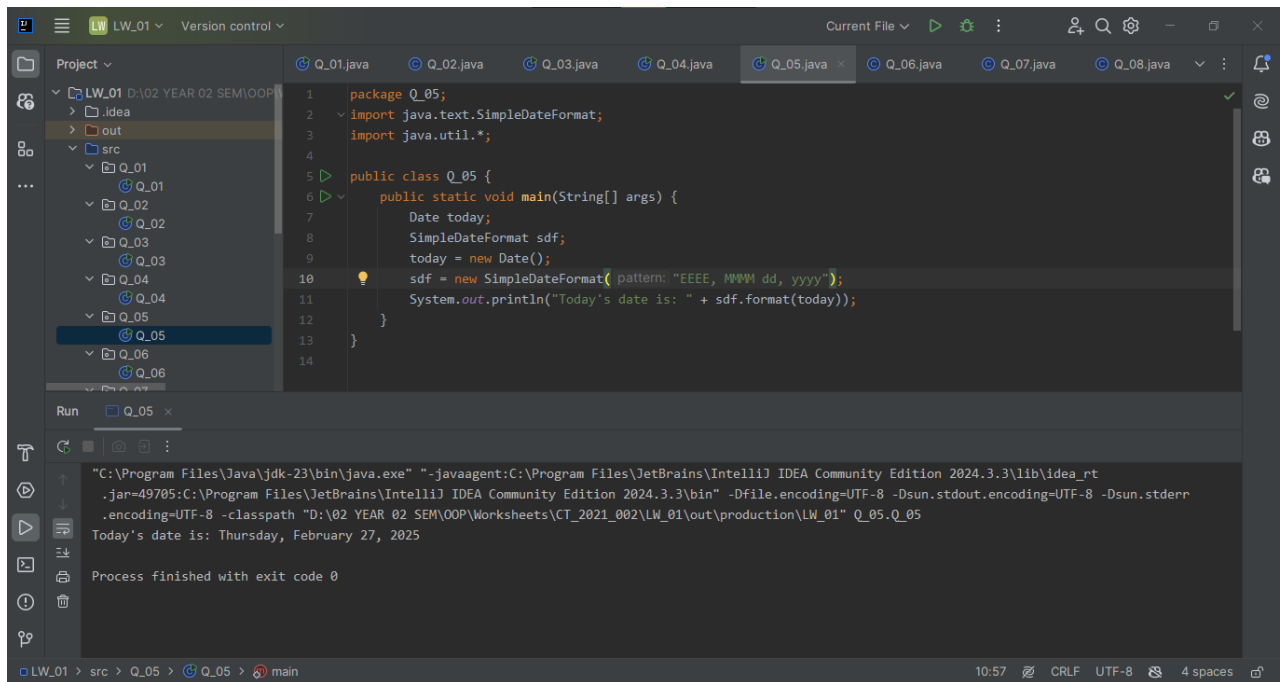
Q 05:

Code:

```
package Q_05;
import java.text.SimpleDateFormat;
import java.util.*;

public class Q_05 {
    public static void main(String[] args) {
        Date today;
        SimpleDateFormat sdf;
        today = new Date();
        sdf = new SimpleDateFormat("EEEE, MMMM dd, yyyy");
        System.out.println("Today's date is: " + sdf.format(today));
    }
}
```

Output:



Q 06:

Code:

```
package Q_06;
import javax.swing.*;
import java.util.*;

public class Q_06 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int width, height;
        String title;

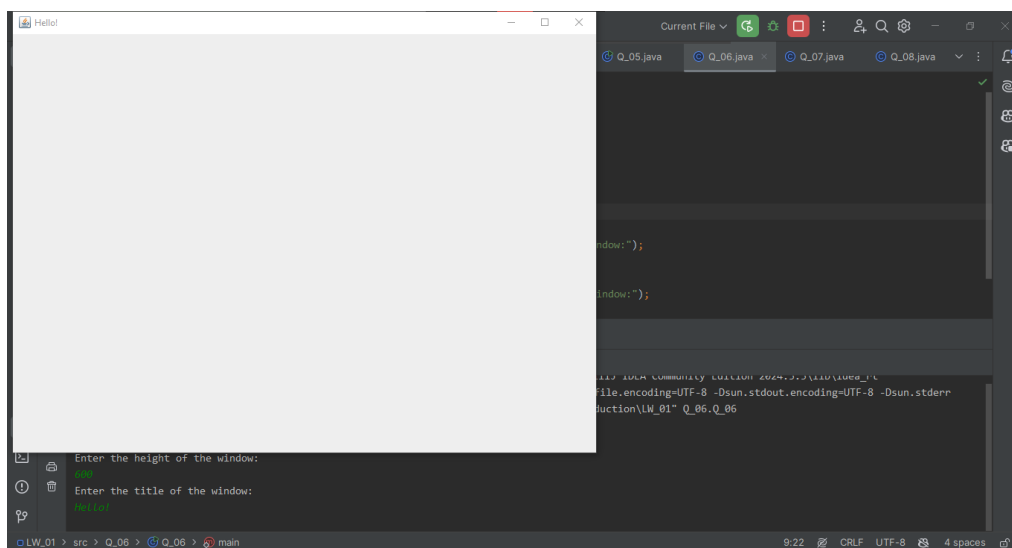
        System.out.println("Enter the width of the window:");
        width = sc.nextInt();

        System.out.println("Enter the height of the window:");
        height = sc.nextInt();

        System.out.println("Enter the title of the window:");
        sc.nextLine();
        title = sc.nextLine();

        JFrame customWindow;
        customWindow = new JFrame();
        customWindow.setSize(width,height);
        customWindow.setTitle(title);
        customWindow.setVisible(true);
        customWindow.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    }
}
```

Output:



Q 07:

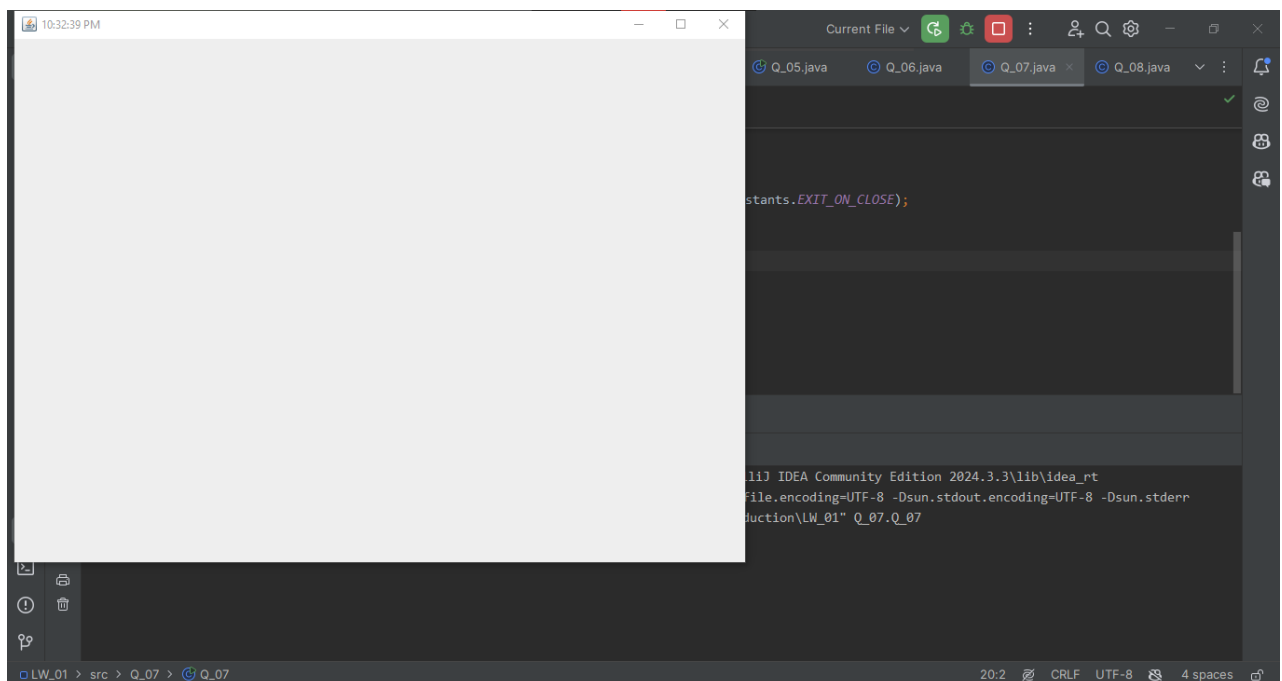
Code:

```
package Q_07;
import java.util.*;
import javax.swing.*;
import java.text.SimpleDateFormat;

public class Q_07 {
    public static void main(String[] args) {
        Date now = new Date();
        SimpleDateFormat sdf = new SimpleDateFormat("hh:mm:ss a");
        String time = sdf.format(now);

        JFrame timeWindow;
        timeWindow = new JFrame();
        timeWindow.setSize(800,600);
        timeWindow.setTitle(time);
        timeWindow.setVisible(true);
        timeWindow.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    }
}
```

Output:



Q 08:

Code:

```
package Q_08;
import java.util.*;

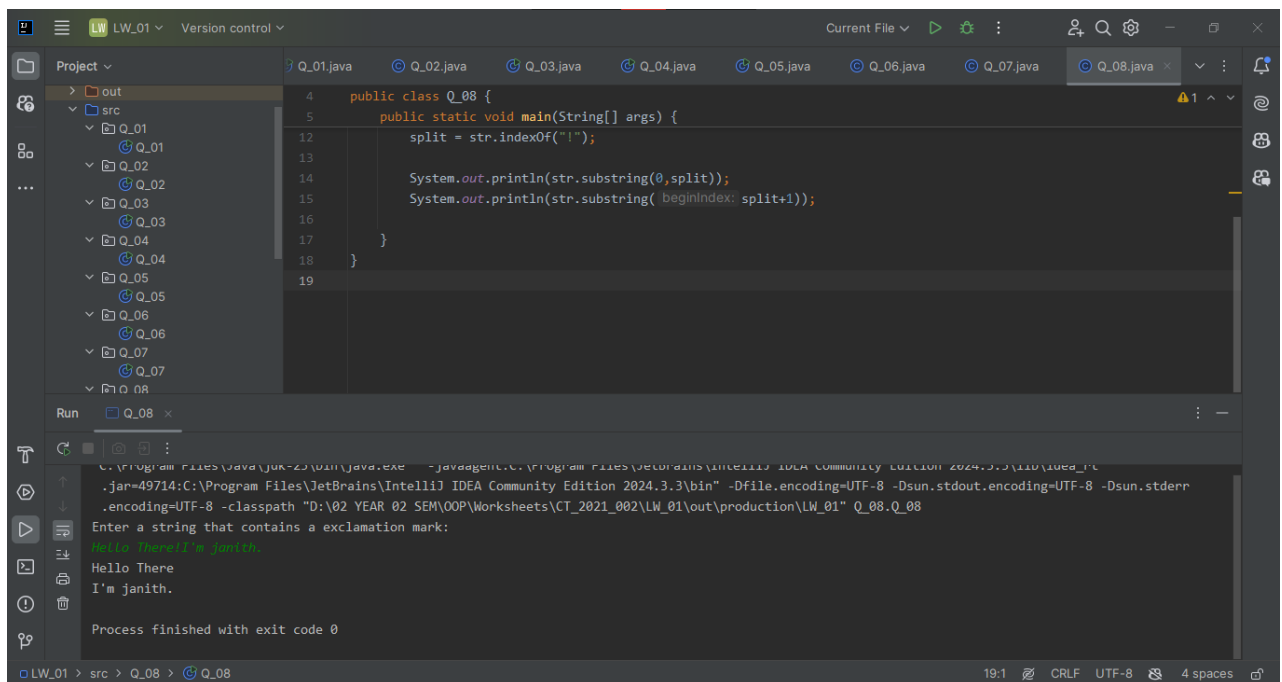
public class Q_08 {
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        String str;
        Integer split;

        System.out.println("Enter a string that contains a exclamation mark:");
        str = scan.nextLine();
        split = str.indexOf("!");

        System.out.println(str.substring(0,split));
        System.out.println(str.substring(split+1));

    }
}
```

Output:

The screenshot shows an IDE window with a project named 'LW_01'. The 'src' folder contains subfolders 'Q_01' through 'Q_07' and a file 'Q_08'. The 'Q_08.java' file is open, showing the same code as in the previous block. The 'Run' tab at the bottom shows the execution output: 'Enter a string that contains a exclamation mark:', 'Hello There', 'I'm janith.', and 'Process finished with exit code 0'. The status bar at the bottom indicates the file is 'Q_08' in the 'src' folder, with a line number of 19:1, CRLF line endings, UTF-8 encoding, and 4 spaces for indentation.

Q 09:

Code:

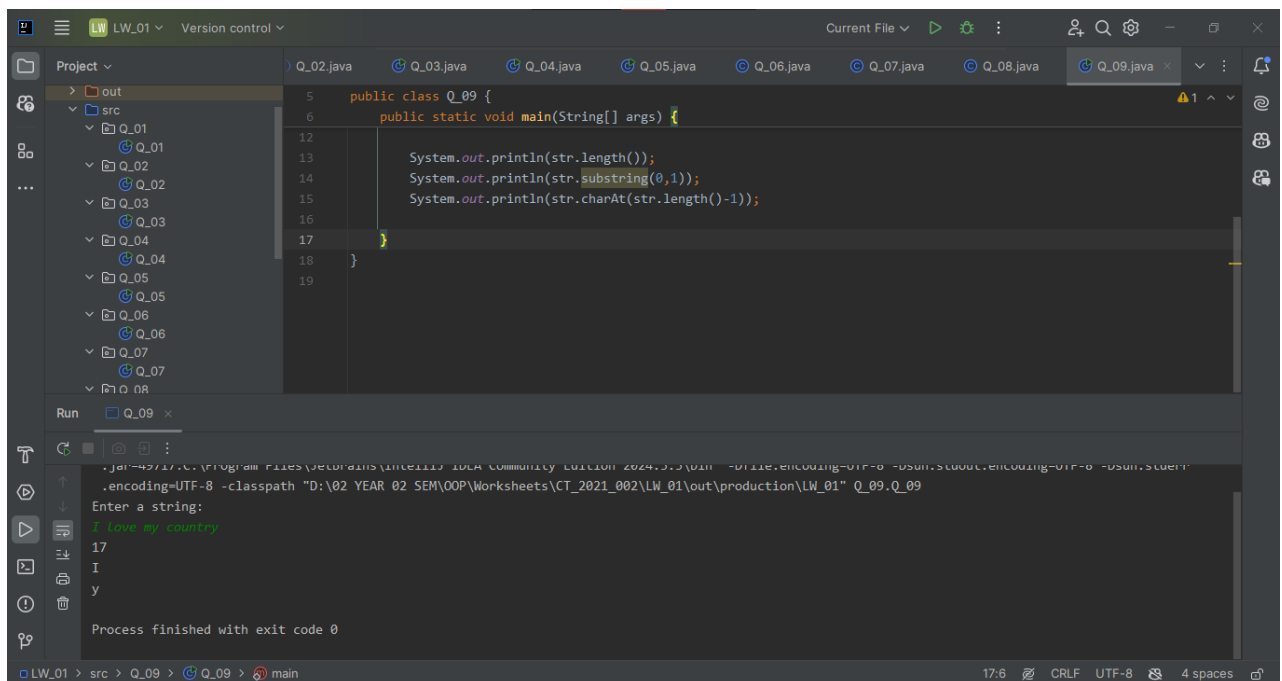
```
package Q_09;
import java.util.Scanner;

public class Q_09 {
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        String str;

        System.out.println("Enter a string:");
        str = scan.nextLine();

        System.out.println(str.length());
        System.out.println(str.substring(0,1));
        System.out.println(str.charAt(str.length()-1));
    }
}
```

Output:

The screenshot shows an IDE window with a project named 'LW_01'. The 'src' folder contains subfolders for each question (Q_01 to Q_09). The 'Q_09' folder is selected, and the file 'Q_09.java' is open in the editor. The code in the editor matches the provided code block. Below the editor is a 'Run' console window. It shows the command to run the program, the input 'I love my country', and the output: '17', 'I', and 'y'. The console also indicates that the process finished with exit code 0. The status bar at the bottom shows the file encoding as UTF-8 and 4 spaces.

Q 10:

Code:

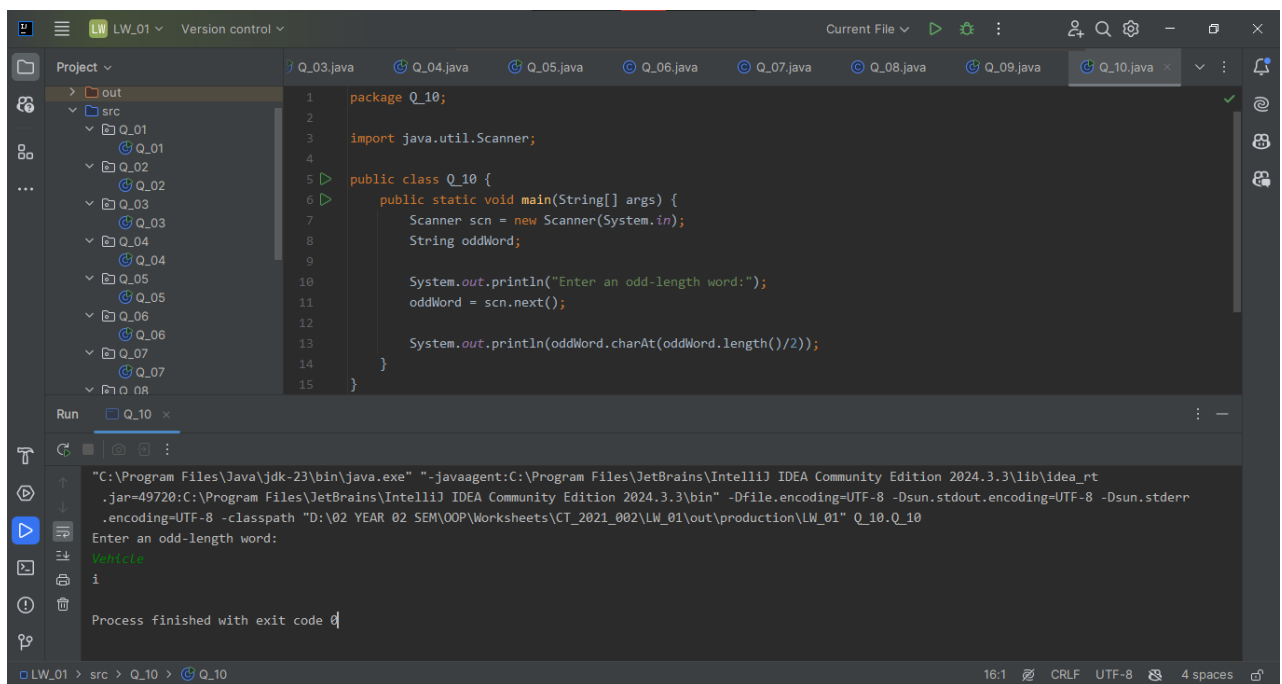
```
package Q_10;
import java.util.Scanner;

public class Q_10 {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String oddWord;

        System.out.println("Enter an odd-length word:");
        oddWord = scn.next();

        System.out.println(oddWord.charAt(oddWord.length()/2));
    }
}
```

Output:

The screenshot shows an IDE window with a project named 'LW_01'. The 'src' folder contains several subfolders labeled 'Q_01' through 'Q_07'. The 'Q_10.java' file is open in the editor, displaying the code from the previous block. Below the editor, the 'Run' tab is active, showing the command prompt output. The command executed is: "C:\Program Files\Java\jdk-23\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\lib\idea_rt.jar=49720:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.3.3\bin" -Dfile.encoding=UTF-8 -Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath "D:\02 YEAR 02 SEM\OOP\Worksheets\CT_2021_002\LW_01\out\production\LW_01" Q_10.Q_10. The output shows the prompt "Enter an odd-length word:" followed by the input "Vehicle" and the output "i". The process finished with exit code 0. The status bar at the bottom indicates the file is at line 16, column 1, with CRLF line endings, UTF-8 encoding, and 4 spaces indentation.

Q 11:

Code:

```
package Q_11;
import java.util.*;

public class Q_11 {
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        String firstName, middleName, lastName;

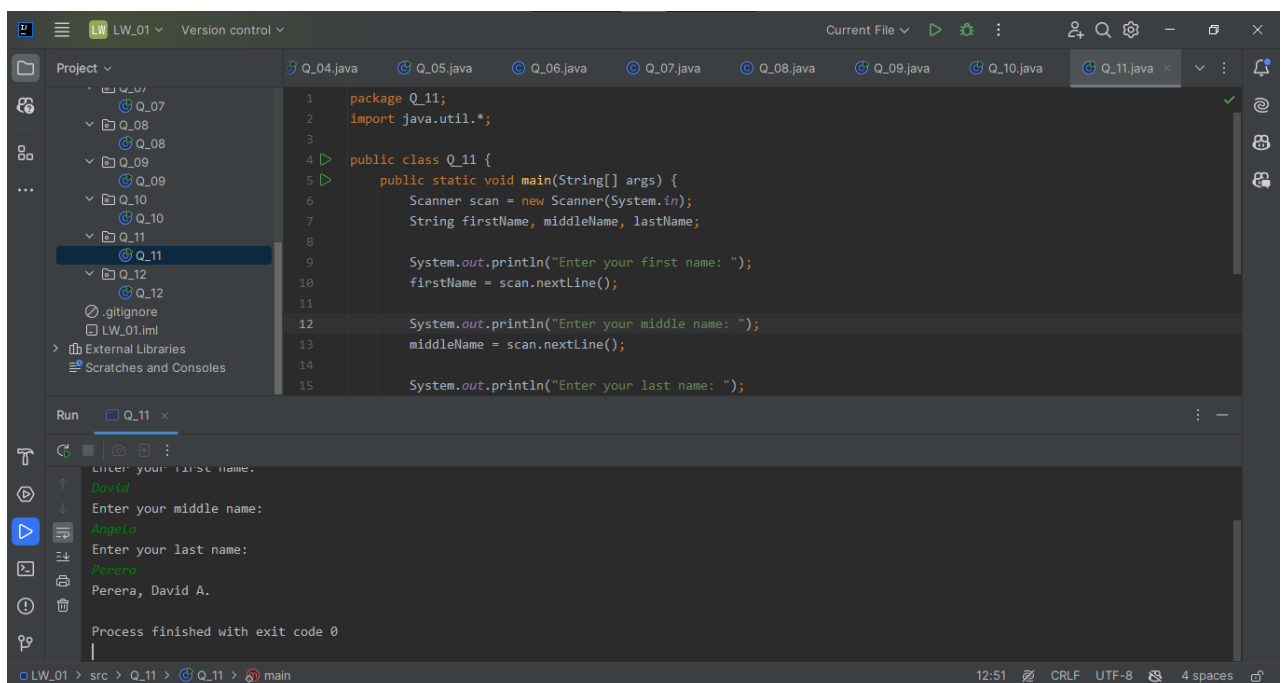
        System.out.println("Enter your first name: ");
        firstName = scan.nextLine();

        System.out.println("Enter your middle name: ");
        middleName = scan.nextLine();

        System.out.println("Enter your last name: ");
        lastName = scan.nextLine();

        System.out.println(lastName+", "+firstName+" "+middleName.charAt(0)+".");
    }
}
```

Output:

The screenshot shows an IDE window with a project named 'LW_01'. The 'Project' view on the left shows a folder structure with subfolders Q_07 through Q_12. The 'Q_11' folder is selected, and the file 'Q_11.java' is open in the editor. The code in the editor matches the code provided in the previous block. Below the editor, the 'Run' tab is active, showing the output of the program. The output consists of four lines of text: 'Enter your first name:', 'Enter your middle name:', 'Enter your last name:', and the final formatted output 'Perera, David A.'. The status bar at the bottom indicates the file is 'Q_11.java' in the 'main' method, with a timestamp of 12:51 and encoding of UTF-8.

Q 12:

Code:

```
package Q_12;
import javax.swing.*;

public class Q_12 {
    public static void main(String[] args) {
        JFrame windowLocation;
        windowLocation = new JFrame();
        windowLocation.setSize(300,200);
        windowLocation.setTitle("My First Frame");
        windowLocation.setLocation(100,50);
        windowLocation.setVisible(true);
        windowLocation.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    }
}
```

Output:

