

The screenshot shows the Microsoft Visual Studio Code interface. The left sidebar has sections for EXPLORER, OPEN EDITORS, INFOBEANS, OUTLINE, TIMELINE, PROJECTS, DATABASES, CLOUD, RUN CONFIGURATION, and JAVA PROJECTS. The OPEN EDITORS section shows three tabs: Practice_84.java, Practice_1.java (which is the active tab), and Practice_82.java. The INFOBEANS section lists Assignment_1 through Assignment_6. The main editor area contains the following Java code:

```
assignment_6 > J Practice_1.java > ...
1 package assignment_6;
2
3 public class Practice_1 {
4
5     public static void main(String[] args) {
6
7         for (int i = 1; i <= 5; i++) {
8             System.out.print("*");
9         }
10    }
11 }
```

The bottom status bar shows the file path PS C:\Users\PCLP\Desktop\infobeans>, line 12, column 1, spaces: 4, UTF-8, CRLF, Java, 15:51, Near record, ENG, 09-10-2023.

```
package assignment_6;

public class Practice_1 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            System.out.print("*");
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobeans
- Explorer:** Shows open editors (Practice_84.java, Practice_1.java, Practice_2.java, Practice_82.java) and infobeans projects (Assignment_1, Assignment_3, Assignment_3_2, Assignment_4, Assignment_5, assignment_6).
- Code Editor:** Displays the following Java code:

```
package assignment_6;

public class Practice_2 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            System.out.println("*");
        }
    }
}
```
- Terminal:** Shows command-line output:

```
server=n,suspend=y,address=localhost:66401' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd3d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_2'
*
*
*
*
*
```
- Bottom Status Bar:** Ln 12, Col 1, Spaces:4, UTF-8, CRLF, Java, High UV, 1551, 09-10-2023.

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobeans
- Explorer:** Shows open editors (Practice_84.java, Practice_1.java, Practice_2.java, Practice_3.java, Practice_82.java) and an INFOBEANS folder containing Assignment_1 through Assignment_5, and assignment_6 (containing Practice_21.java, Practice_1.java, Practice_2.java, Practice_3.java, Practice_4.java, Practice_5.java, Practice_6.java).
- Code Editor:** The Practice_3.java file is open, displaying the following code:

```
package assignment_6;

public class Practice_3 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (i == j) {
                    System.out.print("*");
                }
                System.out.print(" ");
            }
            System.out.println();
        }
    }
}
```
- Output:** Shows a terminal window output:

```
server=n,suspend=y,address=localhost:66467' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_3'
*
*
*
*
*
```
- Bottom Status Bar:** Shows the current file path (PS C:\Users\PCLP\Desktop\infobeans>), line (Ln 20, Col 1 (395 selected)), and encoding (UTF-8). It also includes a Java icon and a Go Live button.

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean
- Editor:** The main editor window displays the code for `Practice_4.java`. The code prints a 5x5 grid of asterisks using nested loops.
- Explorer:** Shows the project structure with files like `Assignment_1.java`, `Assignment_3.java`, etc., under `INFOBEANS`.
- Problems:** 111 problems found.
- Output:** Shows command-line output of the Java command and the resulting asterisk pattern.
- Run Configuration:** Multiple run configurations listed, including `Run: Practice_4`, `Debug: Practice_4`, and `Java`.
- Bottom Bar:** Includes a search bar, system icons, and status information (High UV, ENG, 1552, 09-10-2023).

```
package assignment_6;

public class Practice_4 {

    public static void main(String[] args) {

        for (int i = 0; i < 5; i++) {
            for (int j = 0; j < 5; j++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Explorer:** Shows a project structure with files like Assignment_1, Assignment_3, Assignment_3_2, Assignment_4, Assignment_5, assignment_6, J_Practice_2.java, J_Practice_1.java, J_Practice_2.java, J_Practice_3.java, J_Practice_4.java, J_Practice_5.java, J_Practice_6.java, J_Practice_7.java, J_Practice_8.java, J_Practice_9.java, and J_Practice_10.java.
- Code Editor:** Displays the content of J_Practice_5.java. The code is a Java program that prints the numbers 1 through 25 in a 5x5 grid. It uses two nested loops: an outer loop for rows (i) and an inner loop for columns (j).

```
package assignment_6;

public class Practice_5 {
    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {

            for (int j = 1; j <= 5; j++) {
                System.out.print(j);

            }
            System.out.println();
        }
    }
}
```
- Terminal:** Shows the output of the program being run. The terminal window displays the numbers 1 through 25 in a 5x5 grid, with each row ending with a new line.

```
server=n,suspend=y,address=localhost:66423' `cp` 'C:/Users/PCLP/AppData/Roaming/Code/User/workspaceStorage\9bd1afcd4Sae5dbfae88bddd32d2b8/redhat.java/jdt_ws/infobeans_ade7c1e9/bin' 'assignment_6.Practice_5
12345
12345
12345
12345
12345
PS C:/Users/PCLP/Desktop/infobeans>
```
- Run Configuration:** A dropdown menu in the bottom right corner lists several run configurations, all starting with "Debug: Pra...".

The screenshot shows a Java code editor interface with the following details:

- File Explorer:** Shows multiple Java files in the "INFOBEANS" folder and a "assignment_6" folder, including "Practice_5.java", "Practice_6.java", and several "Assignment_X.java" files.
- Code Editor:** Displays the content of "Practice_6.java".
- Output:** Shows the terminal output of the program execution.
- Run Configuration:** A dropdown menu lists multiple run configurations for "Practice_6.java".
- System Status:** Includes weather information (33°C, Sunny), system time (15:53, 09-10-2023), and other system status indicators.

```
package assignment_6;

public class Practice_6 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {

            for (int j = 1; j <= 5; j++) {
                System.out.print(i);

            }

            System.out.println();
        }
    }
}
```

server=n,suspend=y,address=localhost:66430' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfae88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_6'
11111
22222
33333
44444
55555
PS C:\Users\PCLP\Desktop\infobeans>

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean icon.
- Search Bar:** Infobean
- Explorer:** Shows a tree view of Java files under "INFOBEANS" and "assignment_6".
- Open Editors:** Practice_5.java, Practice_6.java, Practice_7.java (highlighted).
- Code Editor:** Practice_7.java content:

```
1 package assignment_6;
2
3 public class Practice_7 {
4
5     public static void main(String[] args) {
6
7         for (int i = 1; i <= 5; i++) {
8
9             for (int j = 1; j <= i; j++) {
10                 if (i % 2 == 0) {
11                     System.out.print("0");
12                 } else {
13                     System.out.print("1");
14                 }
15             }
16             System.out.println();
17         }
18     }
19 }
20 }
```

- Problems:** 111 errors.
- Output:** Server output for Practice_7.java.
- Terminal:** PS C:\Users\PCLP\Desktop\infobeans>
- Ports:**
- SolConsole:**
- Bottom Status Bar:** Ln 15, Col 1, Spaces: 4, UTF-8, CRLF, Java, Go Live, 33°C Sunny, 15:54, 09-10-2023.

```
package assignment_6;

public class Practice_7 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {

            for (int j = 1; j <= i; j++) {
                if (i % 2 == 0) {
                    System.out.print("0");
                } else {
                    System.out.print("1");
                }
            }
            System.out.println();

        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean icon.
- Search Bar:** Infobean search bar.
- Explorer:** Shows open editors (Practice_5.java, Practice_6.java, Practice_7.java, Practice_8.java) and infobeans (Assignment_1, Assignment_3, Assignment_3_2, Assignment_4, Assignment_5, assignment_6).
- Code Editor:** Practice_8.java code:

```
1 package assignment_6;
2
3 public class Practice_8 {
4
5     public static void main(String[] args) {
6
7         for (int i = 1; i <= 5; i++) {
8
9             for (int j = 1; j <= i; j++) {
10                 System.out.print("*");
11             }
12             System.out.println();
13         }
14     }
15 }
16 }
```
- Terminal:** Shows the command run and its output:

```
server=n,suspend=y,address=localhost:66442' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_8'
*
**
***
****
*****
PS C:\Users\PCLP\Desktop\infobeans>
```
- Status Bar:** Lines: 16, Col: 6, Spaces: 4, UTF-8, CRLF, Java, Go Live, 33°C Sunny, 15:54, 09-10-2023.

The code in the editor is:

```
package assignment_6;

public class Practice_8 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {

            for (int j = 1; j <= i; j++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

```
package assignment_6;

public class Practice_9 {
    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean
- Editor:** The main editor window displays the code for `Practice_10.java`. The code prints a triangular pattern of numbers from 1 to 5.

```
1 package assignment_6;
2
3 public class Practice_10 {
4
5     public static void main(String[] args) {
6         for (int i = 1; i <= 5; i++) {
7
8             for (int j = 1; j <= i; j++) {
9                 System.out.print(i);
10            }
11            System.out.println();
12        }
13    }
14 }
15
16
```

- Explorer:** Shows a list of Java files in the workspace, including `Practice_5.java`, `Practice_6.java`, `Practice_7.java`, `Practice_8.java`, `Practice_9.java`, `Practice_10.java`, `Practice_11.java`, `Practice_12.java`, `Practice_13.java`, `Practice_14.java`, `Practice_15.java`, `Practice_16.java`, `Practice_17.java`, `Practice_18.java`, and `Practice_19.java`.
- Problems:** 111 problems found.
- Output:** Shows command-line output of the build process.

```
server=n,suspend=y,address=localhost:66456' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeanes_ade7c1e9\bin' 'assignment_6.Practice_10'
1
22
333
4444
55555
PS C:\Users\PCLP\Desktop\infobeanes>
```

- Terminal:** Shows the current working directory as `C:\Users\PCLP\Desktop\infobeanes`.
- Run Configuration:** Multiple run configurations for `Practice_10` are listed.
- Java Projects:** Shows the Java projects in the workspace.
- Bottom Bar:** Includes a search bar, system tray icons, and system status information (33°C, 1555, 09-10-2023).

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobeans
- Explorer:** Shows a list of Java files in the project. The file `J Practice_11.java` is selected and highlighted in blue.
- Code Editor:** Displays the following Java code:

```
package assignment_6;

public class Practice_11 {

    public static void main(String[] args) {
        int a = 65;
        for (int i = 0; i < 5; i++) {
            for (int j = 0; j <= i; j++) {
                System.out.print((char) (a + j));
            }
            System.out.println();
        }
    }
}
```
- Problems:** 111 errors listed.
- Output:** server=n,suspend=y,address=localhost:60465 ' -cp ' C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'assignment_6.Practice_11'
- Terminal:** PS C:\Users\PCLP\Desktop\infobeans>
- Ports:** None
- SolConsole:** None
- Status Bar:** Ln 15, Col 6 Spaces:4 UTF-8 CRLF {} Java Go Live 33°C Sunny 1555 09-10-2023
- Bottom Bar:** Type here to search

The screenshot shows a Java code editor interface with a dark theme. The main window displays a Java file named `Practice_12.java` containing the following code:

```
package assignment_6;

public class Practice_12 {
    public static void main(String[] args) {
        int a = 97;
        for (int i = 0; i < 5; i++) {
            for (int j = 0; j <= i; j++) {
                System.out.print((char) (a + j));
            }
            System.out.println();
        }
    }
}
```

The code prints a triangular pattern of characters from 'a' to 'e'. The output in the terminal tab shows:

```
server=n,suspend=y,address=localhost:66471` '-cp` 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'assignment_6.Practice_12'
a
ab
abc
abcd
abcde
PS C:\Users\PCLP\Desktop\infobeans>
```

The status bar at the bottom indicates the current file is `Practice_12.java`, and the code editor shows line 16, column 2.

The screenshot shows a Java code editor interface with a dark theme. The main window displays a Java file named `Practice_13.java` under the `INFOBEANS` project. The code contains a `main` method that prints a pattern of numbers to the console. The output in the terminal shows the pattern:

```
server=n,suspend=y,address=localhost:66477' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade\c1e9\bin'\ 'assignment_6.Practice_13'
1
01
101
0101
10101
PS C:\Users\PCLP\Desktop\infobeans>
```

The code editor includes various toolbars and panels such as `EXPLORER`, `PROBLEMS`, `OUTPUT`, `DEBUG CONSOLE`, `TERMINAL`, `PORTS`, and `SOL CONSOLE`. A status bar at the bottom provides information like the current line and column (Ln 15, Col 14), encoding (UTF-8), and date/time (09-10-2023).

```
package assignment_6;

public class Practice_13 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {

                if ((i + j) % 2 == 0) {
                    System.out.print("1");
                } else {
                    System.out.print("0");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, and Print.
- Search Bar:** Infobeans
- Explorer:** Shows a list of Java files in the current workspace, including Practice_6.java, Practice_7.java, Practice_8.java, Practice_9.java, Practice_10.java, Practice_11.java, Practice_12.java, Practice_13.java, and Practice_14.java.
- Open Editors:** Practice_8.java, Practice_9.java, Practice_10.java, Practice_11.java, Practice_12.java, Practice_13.java, Practice_14.java (highlighted), Practice_15.java, and Practice_16.java.
- Code Editor:** Displays the content of Practice_14.java. The code prints a 5x5 grid of numbers from 1 to 25.

```
package assignment_6;
public class Practice_14 {
    public static void main(String[] args) {
        int a = 1;
        for (int i = 1; i < 5; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print(a);
                a++;
            }
            System.out.println();
        }
    }
}
```

- Problems:** 111 (highlighted)
- Output:** Shows the command line output of the program execution.

```
PS C:\Users\PLCP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:66484' '-cp' 'C:\Users\PLCP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'assignment_6.Practice_14'
1
23
456
78910
PS C:\Users\PLCP\Desktop\infobeans>
```

- Terminal:** Shows the command line interface with the same output as the Output tab.
- Ports:** No ports listed.
- SolConsole:** No logs listed.
- Bottom Status Bar:** Ln 16, Col 1, Spaces:4, UTF-8, CRLF, Java, Go Live, INR/USD -0.17%, 1557, 09-10-2023.

The screenshot shows a Java code editor interface with a dark theme. The code in the main editor window is:

```
package assignment_6;

public class Practice_15 {

    public static void main(String[] args) {

        int a = 65;
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print((char) a + " ");
            }
            a++;
            System.out.println();
        }
    }
}
```

The code defines a class named `Practice_15` which contains a `main` method. This method prints a diamond shape using nested loops and `System.out.print` statements. The output of the code is visible in the terminal tab of the IDE, showing the following pattern:

```
A
B B
C C C
D D D D
E E E E E
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, Find, and Run.
- Search Bar:** Infobeans
- Explorer:** Shows a list of Java files in the current workspace, including Practice_8.java through Practice_16.java.
- Open Editors:** The main editor window displays the code for Practice_16.java. The code prints a triangular pattern of lowercase letters 'a' through 'o' to the console.
- InfoBeans:** A sidebar under the Explorer shows a list of Java files from Practice_8.java to Practice_16.java.
- Bottom Status Bar:** Shows the command line output: "server=n,suspend=y,address=localhost:50129" and "PS C:\Users\PCLP\Desktop\infobeans>". It also displays system information: 33°C Sunny, 16:29, 09-10-2023.

```
package assignment_6;

public class Practice_16 {

    public static void main(String[] args) {
        int a = 97;
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print((char) a + " ");
                a++;
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for Save, Undo, Redo, Cut, Copy, Paste, Find, etc.
- Search Bar:** Type here to search
- Explorer:** Shows a tree view of files under the INFOBEANS project, including Practice_16.java, Practice_17.java, Practice_18.java, Practice_19.java, Practice_20.java, Practice_22.java, Practice_23.java, Practice_24.java, Practice_25.java, Practice_26.java, Practice_27.java, Practice_28.java, Practice_29.java, Practice_30.java, Practice_31.java, Practice_32.java, and Practice_33.java.
- Code Editor:** The active file is Practice_17.java. The code prints a pattern of '#' and '*' characters. The output in the terminal shows:

```
server=n,suspend=y,address=localhost:50138' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_17'
*
# #
* * *
# # # #
* * * * *
```
- Terminal:** Shows the command run and the resulting output.
- Bottom Status Bar:** Ln 20, Col 1, Spaces:4, UTF-8, CRLF, Java, Go Live, 34°C Sunny, 1630, 09-10-2023

```
package assignment_6;

public class Practice_17 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (i % 2 == 0) {
                    System.out.print(" # ");
                } else {
                    System.out.print(" * ");
                }

            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_16.java, Practice_17.java, Practice_18.java, Practice_19.java, Practice_20.java, Practice_22.java, Practice_23.java, Practice_24.java, Practice_25.java, Practice_26.java, Practice_27.java, Practice_28.java, Practice_29.java, Practice_30.java, Practice_31.java, and Practice_32.java.
- Editor:** The main editor window displays the code for Practice_18.java. The code prints a pattern of numbers (1, 0, 1, 0, 1) to the console. A yellow lightbulb icon is positioned over the if statement at line 8, indicating a potential issue.
- Terminal:** The terminal output shows the command run and the resulting output:

```
server=n,suspend=y,address=localhost:50145' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_18'
1
101
1010
10101
PS C:\Users\PCLP\Desktop\infobeans>
```
- Bottom Status Bar:** Shows Ln 8, Col 31, Spaces:4, UTF-8, CRLF, Java, Go Live, 34°C Sunny, 1630, 09-10-2023.

```
package assignment_6;

public class Practice_18 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (j % 2 == 0) {
                    System.out.print(0);
                } else {
                    System.out.print(1);
                }

            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the "OPEN EDITORS" and "INFOBEANS" sections.
- Code Editor:** The file "Practice_19.java" is open, containing the following code:

```
package assignment_6;

public class Practice_19 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (i == 5 || j == 1 || i == j) {
                    System.out.print("*");
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

A yellow warning icon is located at the top of the code editor area, specifically above line 8. The status bar at the bottom right shows the following information:

- Ln 8, Col 48
- Spaces: 4
- UTF-8
- CRLF
- { } Java
- Go Live
- 34°C Sunny
- 16:31
- 09-10-2023

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Open, Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, Select All, and Run.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of files under "INFOBEANS". The file "J Practice_20.java" is selected.
- Editor:** Displays the code for "Practice_20.java". The code prints a pattern where numbers 1 through 5 are printed on separate lines, and each number is followed by a space if it's not at the start of a line.

```
package assignment_6;

public class Practice_20 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (j == 1 || i == j || i == 5) {
                    System.out.print(j);
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println(" ");
        }
    }
}
```

- Bottom Status Bar:** Shows the current file path (C:\Users\PCLP\Desktop\infobeans>), line (Ln 15, Col 10), and character count (Spaces: 4, CRLF: 1631).
- Terminal:** Shows the command run: server=n, suspend=y, address=localhost:50160' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88baddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'assignment_6.Practice_20'. The output shows the pattern being printed.

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, and Print.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of files and projects. Under "INFOBEANS", there are several Assignment sub-folders and a Practice_21.java file.
- Code Editor:** Displays the Java code for Practice_21.java. The code prints a pattern of numbers where each row has 5 columns, starting from 1 and ending at 5, with spaces separating the numbers.

```
package assignment_6;

public class Practice_21 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (i == 5 || i == j || j == 1) {
                    System.out.print(i);
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

- Terminal:** Shows the command line output of the program execution.

```
server=n,suspend=y,address=localhost:50167' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_21'
1
22
3 3
4 4
55555
PS C:\Users\PCLP\Desktop\infobeans>
```

- Status Bar:** Shows the current line (Ln 17, Col 2), spaces (Spaces: 4), encoding (UTF-8), and date/time (09-10-2023).

The screenshot shows a Java code editor interface with a dark theme. The code in the editor is as follows:

```
assignment_6 > J Practice_22.java > Language Support for Java(TM) by Red Hat > Practice_22 > main(String[])
```

```
1 package assignment_6;
2
3 public class Practice_22 {
4
5     public static void main(String[] args) {
6         // char a = 'a';
7         for (char i = 'A'; i <= 'E'; i++) {
8             for (char j = 'A'; j <= i; j++) {
9                 if (i == 'E' || j == 'A' || i == j) {
10                     System.out.print(j);
11                 } else {
12                     System.out.print(" ");
13                 }
14             }
15         }
16     }
17 }
18
19
20 }
```

The code consists of a single class named `Practice_22` with a `main` method. The `main` method contains a nested loop structure. The outer loop iterates over characters from 'A' to 'E'. The inner loop iterates over characters from 'A' up to the current value of `i`. Inside the inner loop, there is a conditional check. If `i` is 'E', or `j` is 'A', or `i` equals `j`, then `j` is printed. Otherwise, a space character is printed. After the inner loop completes for a given `i`, a new line is printed.

```
package assignment_6;

public class Practice_22 {

    public static void main(String[] args) {
        // char a = 'a';
        for (char i = 'A'; i <= 'E'; i++) {
            for (char j = 'A'; j <= i; j++) {
                if (i == 'E' || j == 'A' || i == j) {
                    System.out.print(j);

                } else {
                    System.out.print(" ");
                }
                // a++;
            }

            System.out.println(" ");
        }
    }
}
```

```
package assignment_6;

public class Practice_23 {

    public static void main(String[] args) {
        char a = 'a';
        for (char i = 'a'; i <= 'e'; i++) {
            for (char j = 'a'; j <= i; j++) {
                if (i == 'e' || j == 'a' || i == j) {
                    System.out.print(a);
                } else {
                    System.out.print(" ");
                }
                a++;
            }
            System.out.println(" ");
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, Select All, and Run.
- Explorer:** Shows a tree view of Java files under "OPEN EDITORS" and "INFOBEANS". The file "J Practice_24.java" is selected in the "OPEN EDITORS" section.
- Editor:** Displays the code for "Practice_24.java". The code prints a pattern of asterisks and '@' symbols.
- Output:** Shows the terminal output of the program execution.
- Bottom Status Bar:** Includes information like Ln 1, Col 22, Spaces: 4, UTF-8, CRLF, Java, Go Live, Near record, ENG, and a date/time stamp (09-10-2023).

```
package assignment_6;

public class Practice_24 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {

                if (i == 5 || i == j || j == 1) {
                    System.out.print("*");
                } else {
                    System.out.print("@");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows the Eclipse IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard toolbar icons.
- Search Bar:** Infobeans
- Open Editors:** Practice_19.java, Practice_20.java, Practice_21.java, Practice_22.java, Practice_23.java, Practice_24.java, Practice_25.java (highlighted).
- Project Explorer:** Shows multiple Java files under INFOBEANS.
- Code Editor:** Displays the Java code for Practice_25.java. The code prints a diamond shape to the console.
- Problems View:** Shows 111 errors.
- Output View:** Shows the command line output of the Java compilation and execution.
- Terminal View:** Shows the terminal window with the command PS C:\Users\PCLP\Desktop\infobeans> ^C.
- SolConsole View:** Shows the SQL console.
- Bottom Status Bar:** Includes file navigation, code editor settings (Ln 19, Col 1, Spaces: 4, UTF-8, CRLF), Java selection, and date/time (1635 09-10-2023).

```
package assignment_6;

public class Practice_25 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 5; j >= i; j--) {

                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean
- Editor:** The main editor window displays the code for `Practice_26.java`. The code prints a pattern of numbers and symbols to the console.
- Explorer:** Shows a tree view of files in the workspace, including `assignment_6`, `Practice_18.java...`, `Practice_19.java...`, `Practice_20.java...`, `Practice_21.java...`, `Practice_22.java...`, `Practice_23.java...`, `Practice_24.java...`, `Practice_25.java...`, `INFOBEANS`, `Practice_22.java`, `Practice_23.java`, `Practice_24.java`, `Practice_25.java`, `Practice_26.java` (which is selected), `Practice_27.java`, `Practice_28.java`, `Practice_29.java`, and `Practice_30.java`.
- Problems:** Shows 111 issues.
- Output:** Shows the command used to run the program and the resulting output.
- Terminal:** Shows the command run and the output.
- SolConsole:** Shows the command run and the output.
- Run Configuration:** Shows multiple configurations for running the program.
- Java Projects:** Shows the current Java project structure.
- Bottom Bar:** Includes icons for file operations, search, and system status (temperature, battery, date).

```
package assignment_6;

public class Practice_26 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (j % 2 == 0) {
                    System.out.print("#");
                } else {
                    System.out.print("*");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with a dark theme. The code in the editor is as follows:

```
package assignment_6;

public class Practice_27 {
    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                if (i == 3 && j == 2 || i == 4 && j == 2 || i == 4 && j == 3) {
                    System.out.print(" ");
                } else {
                    System.out.print(i);
                }
            }
            System.out.println();
        }
    }
}
```

The code defines a class named `Practice_27` which contains a `main` method. The `main` method prints a pattern of numbers. The outer loop (`i`) runs from 1 to 5. The inner loop (`j`) runs from 1 to `i`. If `i` is 3 and `j` is 2, or if `i` is 4 and `j` is 2 or 3, a space is printed. Otherwise, the value of `i` is printed. After each row, a new line is printed.

The screenshot shows a Java code editor interface with a dark theme. The code in the editor is as follows:

```
package assignment_6;

public class Practice_28 {
    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= (i * 2) - 1; j++) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

The code consists of two nested loops. The outer loop iterates from 1 to 5. The inner loop iterates from 1 to $(i * 2) - 1$. The inner loop prints each value of j followed by a space, and then prints a new line after each row.

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobean
- Editor:** The main code editor displays the following Java code for `Practice_29.java`:

```
1 package assignment_6;
2
3 public class Practice_29 {
4
5     public static void main(String[] args) {
6         for (int i = 1; i <= 5; i++) {
7             for (int j = 1; j <= (i * 2) - 1; j++) {
8                 System.out.print(i);
9             }
10            System.out.println();
11        }
12    }
13}
14
15}
16
17}
```

- Explorer:** Shows a list of Java files in the workspace, including `Practice_21.java`, `Practice_22.java`, `Practice_23.java`, `Practice_24.java`, `Practice_25.java`, `Practice_26.java`, `Practice_27.java`, `Practice_28.java`, `Practice_29.java`, and `Practice_30.java`.
- Problems:** Shows 111 errors in the code.
- Output:** Displays the command used to run the program and the output:

```
server=n,suspend=y,address=localhost:50222' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfae88bddd32d2b8\redhat.java\jdt_ws\infobeanes_ade7c1e9\bin'\ 'assignment_6.Practice_29'
1
222
33333
4444444
555555555
PS C:\Users\PCLP\Desktop\infobbeans>
```

- Terminal:** Shows the command run and the output.
- Status Bar:** Ln 17, Col 1 | Spaces: 4 | UTF-8 | CRLF | {} Java | 1637 | 34°C Sunny | ENG | 09-10-2023

```
package assignment_6;

public class Practice_29 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= (i * 2) - 1; j++) {
                System.out.print(i);

            }
            System.out.println();
        }

    }

}
```

The screenshot shows a Java code editor interface with a dark theme. The code in the editor is as follows:

```
package assignment_6;

public class Practice_30 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = i; j >= 1; j--) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

The code prints a diamond shape to the console. The output in the terminal tab is:

```
*****
 ***
 *
*
 ****
```

The terminal also shows the command used to run the program:

```
server=n,suspend=y,address=localhost:50229' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfae88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade\c1e9\bin'\ 'assignment_6.Practice_30'
```

The screenshot shows a Java code editor interface with the following details:

- File Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_31.java, Practice_30.java, Practice_32.java, Practice_33.java, Practice_34.java, Practice_35.java, Practice_36.java, Practice_37.java, Practice_38.java, Practice_39.java, Practice_40.java, Practice_41.java, Practice_42.java, Practice_43.java, Practice_44.java, Practice_45.java, and Practice_46.java.
- Code Editor:** The current file is Practice_31.java. The code contains a for loop that prints numbers from 1 to 5. A yellow lightbulb icon is shown over the first iteration of the inner loop.
- Terminal:** The terminal output shows the command run and the resulting output:

```
server=n,suspend=y,address=localhost:50235' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88badd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_31'
12345
123
12
1
```
- Status Bar:** Shows the current line (Ln 8, Col 43), spaces (Spaces: 4), encoding (UTF-8), and date/time (16:38, 34°C, Sunny, 09-10-2023).

```
package assignment_6;

public class Practice_31 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {

            for (int j = 1; j <= i; j++) {
                System.out.print(j);
            }
            System.out.println();
        }

    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Save, Undo, Redo, Find, Replace, Copy, Paste, Cut, Select All, and Delete.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of files under "OPEN EDITORS" and "INFOBEANS". The "INFOBEANS" section contains many files named "Practice_30.java" through "Practice_45.java".
- Editor:** The main area displays the code for "Practice_32.java". The code prints a triangular pattern of numbers:package assignment_6;

public class Practice_32 {

 public static void main(String[] args) {

 for (int i = 5; i >= 1; i--) {
 for (int j = 1; j <= i; j++) {
 System.out.print(i);
 }
 System.out.println();
 }
 }
}
- Bottom Status Bar:** Shows the current file path (C:\Users\PCLP\Desktop\infobeans>), line (Ln 15, Col 1), and other system information like temperature (34°C), weather (Sunny), and date (09-10-2023).

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** infobeans
- Explorer:** Shows a tree view of files under "INFOBEANS". The file "J Practice_33.java" is selected.
- Editor:** Displays the code for "Practice_33.java". The code prints a diamond shape pattern:

```
package assignment_6;

public class Practice_33 {

    public static void main(String[] args) {
        for (char i = 'E'; i >= 'A'; i--) {
            for (char j = 'A'; j <= i; j++) {
                System.out.print(j + " ");
            }
            System.out.println();
        }
    }
}
```

- Output:** Shows the terminal output of the program execution:

```
server=n,suspendy,address=localhost:58253' '-cp 'C:\Users\PCPL\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88baddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_33'
A B C D E
A B C D
A B C
A B
A
PS C:\Users\PCPL\Desktop\infobeans>
```

- Bottom Status Bar:** Ln 15, Col 1 | Spaces:4 | UTF-8 | CRLF | {} Java | Go Live | 34°C Sunny | 1639 | 09-10-2023

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean
- Editor:** The main editor window displays the code for `Practice_34.java`. The code prints a pattern of characters from 'E' to 'A' in descending order, followed by a new line.

```
package assignment_6;
public class Practice_34 {
    public static void main(String[] args) {
        for (char i = 'E'; i >= 'A'; i--) {
            for (char j = 'A'; j <= i; j++) {
                System.out.print(i);
            }
            System.out.println();
        }
    }
}
```

- Explorer:** Shows a list of Java files in the workspace, including `Practice_31.java`, `Practice_32.java`, `Practice_33.java`, `Practice_34.java`, `Practice_35.java`, `Practice_36.java`, `Practice_37.java`, `Practice_38.java`, `Practice_39.java`, `Practice_40.java`, `Practice_41.java`, `Practice_42.java`, and `Practice_43.java`.
- Problems:** Shows 111 problems in the workspace.
- Output:** Shows the command-line output of the Java compiler and the terminal output.

```
server=n,suspendy,address=localhost:58259' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_34'
EEEEEE
DDDD
CCCC
BBB
AA
PS C:\Users\PCLP\Desktop\infobeans>
```

- Terminal:** Shows the command `java -cp 'C:\Users\PCLP\Desktop\infobeans\assignment_6\bin' 'assignment_6.Practice_34'` being run.
- Ports:** Shows several port numbers (1024, 1025, 1026, 1027, 1028, 1029) associated with the process.
- SolConsole:** Shows the Java version and system information.
- Bottom Status Bar:** Shows the current temperature (34°C), weather (Sunny), date (09-10-2023), and time (16:39).

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Run | Debug | Run main | Debug main
- Search Bar:** Type here to search
- Explorer:** Shows files like Practice_31.java, Practice_32.java, Practice_33.java, Practice_34.java, Practice_35.java, Practice_36.java, Practice_37.java, Practice_38.java, Practice_39.java, Practice_40.java, Practice_41.java, and Practice_42.java.
- Editor:** The code for Practice_35.java is displayed. The code prints a diamond pattern of asterisks (*). It uses nested loops to iterate through rows and columns. It prints a row of asterisks if the sum of the current row index and column index is 5 or if the difference between them is 1. Otherwise, it prints a space.
- Terminal:** Shows the command run and the output of the program printing the diamond pattern.
- Bottom Status Bar:** Shows the file path C:\Users\PCLP\Desktop\infobeans>, line 16, column 10, and other system information like temperature and date.

```
package assignment_6;

public class Practice_35 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                if (i == 5 || j == i || j == 1) {
                    System.out.print("*");
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobean
- Left Sidebar (EXPLORER):** Shows a tree view of Java files under "INFOBEANS". The current file, Practice_36.java, is selected.
- Code Editor:** Displays the following Java code:

```
package assignment_6;

// ABCDE
// A D
// A C
// AB
// A

public class Practice_36 {

    public static void main(String[] args) {
        for (char i = 'E'; i >= 'A'; i--) {
            for (char j = 'A'; j <= i; j++) {
                if (i == 'E' || j == i || j == 'A') {
                    System.out.print(j);
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

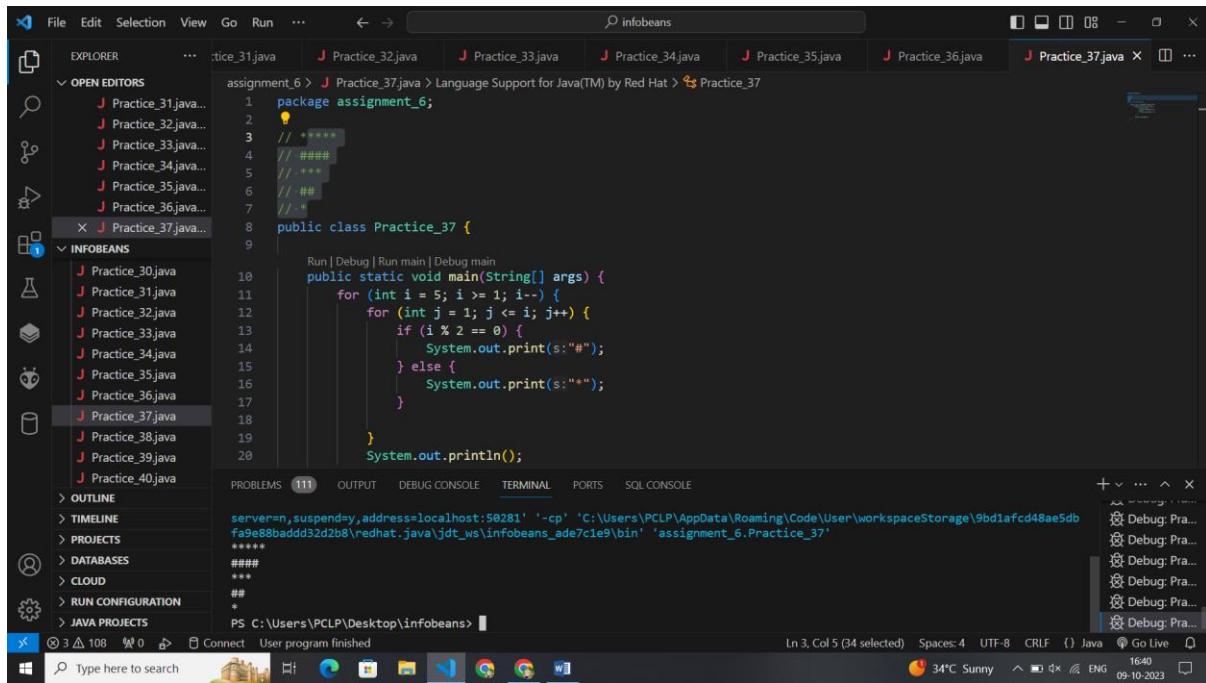
The code prints a pattern of characters based on user input i and j. The output for i='E' is:

ABCDE
A D
A C
AB
A

Output Console: Shows the command run and the resulting output:

```
server=n,suspend=y,address=localhost:50274' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88badd3d2b8\redhat.java\jdt_ws\infobeanes_ade7c1e9\bin'\ 'assignment_6.Practice_36'
ABCDE
A D
A C
AB
A
```

Bottom Status Bar: Includes file navigation (1 of 108), search (⌘ F), terminal (Terminal), system status (34°C, 1640), and date/time (09-10-2023).



```
package assignment_6;

// *****
// #####
// ***
// ##
// *
public class Practice_37 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                if (i % 2 == 0) {
                    System.out.print("#");
                } else {
                    System.out.print("*");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with a dark theme. The code in the main editor window is as follows:

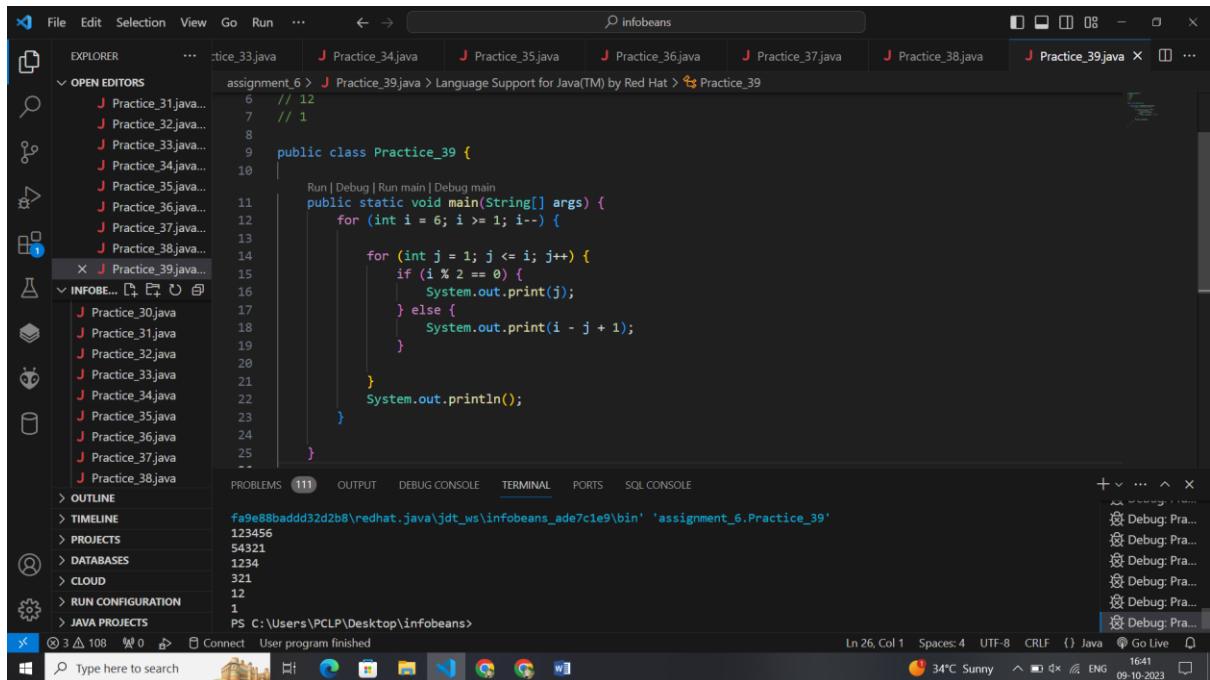
```
package assignment_6;

// 55555
// 4 4
// 3 3
// 22
// 1

public class Practice_38 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                if (i == 5 || j == i || j == 1) {
                    System.out.print(i);
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

The code prints a right-angled triangle pattern where the first row has 5 characters, the second has 4, and so on down to 1. All numbers are printed in bold. The pattern is formed by printing numbers and spaces.



```
package assignment_6;
// 123456
// 54321
// 1234
// 321
// 12
// 1

public class Practice_39 {

    public static void main(String[] args) {
        for (int i = 6; i >= 1; i--) {

            for (int j = 1; j <= i; j++) {
                if (i % 2 == 0) {
                    System.out.print(j);
                } else {
                    System.out.print(i - j + 1);
                }

            }
            System.out.println();
        }

    }
}
```

The screenshot shows the Eclipse IDE interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard Eclipse toolbar icons.
- Search Bar:** Infobean
- Open Editors:** Practice_32.java, Practice_33.java, Practice_34.java, Practice_37.java, Practice_38.java, Practice_39.java, Practice_40.java (selected).
- Project Explorer:** Shows files Practice_31.java through Practice_39.java.
- Infobean Explorer:** Shows files Practice_30.java through Practice_39.java.
- Code Editor:** Displays the Java code for Practice_40.java, which prints a diamond pattern of asterisks.
- Run Configuration:** Multiple configurations listed under 'Debug: Pra...'.
- Output:** Shows the command-line output of the program execution.
- Terminal:** Shows the terminal prompt PS: C:\Users\PCLP\Desktop\infobbeans>.
- Status Bar:** Includes file statistics (108 lines), connection status, user program finished, and system information (34°C, 1641, 09-10-2023).

```
package assignment_6;

/*
 */
/*
 */
/*
 */
/*
 */
public class Practice_40 {

    public static void main(String[] args) {
        int temp = 1;
        for (int i = 1; i <= 6; i++) {
            for (int j = 1; j <= temp; j++) {
                System.out.print("*");
            }
            temp = temp + i;
            System.out.println("");
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of Java files under the INFOBEANS category, including Practice_40.java, Practice_41.java, Practice_42.java, Practice_43.java, Practice_44.java, Practice_45.java, Practice_46.java, Practice_47.java, Practice_48.java, Practice_49.java, Practice_50.java, Practice_51.java, Practice_52.java, Practice_53.java, Practice_54.java, Practice_55.java, and Practice_56.java.
- Code Editor:** The main editor window displays the code for Practice_41.java. The code prints a pattern of characters A through P to the console. A yellow dot marker is positioned at the start of the inner loop's body on line 13.
- Problems:** 111 issues are listed in the Problems view.
- Output:** The terminal output shows the command used to run the Java application and the resulting printed output: A BCD EFGHIJKLMNOP
- Run Configuration:** Multiple run configurations are listed in the bottom right corner, all labeled "Debug: Pra...".
- Bottom Status:** Includes system information like CPU, RAM, and disk usage, along with weather and date/time.

```
package assignment_6;

// A
// BCD
// EFGHI
// JKLMNOP

public class Practice_41 {

    public static void main(String[] args) {
        char c = 'A';
        int temp = 1;
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= temp; j++) {
                System.out.print(c);
                c++;
            }
            temp = temp + i + 1;
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_40.java, Practice_41.java, Practice_42.java, Practice_43.java, Practice_44.java, Practice_45.java, Practice_46.java, Practice_47.java, Practice_48.java, Practice_49.java, Practice_50.java, Practice_51.java, Practice_52.java, Practice_53.java, Practice_54.java, and Practice_55.java.
- Editor:** The main editor window displays the content of Practice_42.java. The code prints the numbers 54321, 5432, 543, 54, and 5, each on a new line, by nested loops.
- Terminal:** The terminal output shows the command run and the resulting output:

```
server=n,suspend=y,address=localhost:50317' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbf3e988badd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'assignment_6.Practice_42'
54321
5432
543
54
5
PS C:\Users\PCLP\Desktop\infobeans>
```
- Bottom Status Bar:** Shows the current file path (C:\Users\PCLP\Desktop\infobeans), line number (Ln 19, Col 1), and other system information like temperature (34°C) and date (09-10-2023).

```
package assignment_6;

// 54321
// 5432
// 543
// 54
// 5
public class Practice_42 {
    public static void main(String[] args) {
        for(int i =1;i<=5;i++){
            for(int j =5;j>=i;j--){
                System.out.print(j);
            }
            System.out.println();
        }

    }
}
```

The screenshot shows a Java development environment with the following details:

- File Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_41.java, Practice_42.java, Practice_43.java, Practice_44.java, Practice_45.java, Practice_46.java, Practice_47.java, Practice_48.java, Practice_49.java, Practice_50.java, Practice_51.java, Practice_52.java, Practice_53.java, and Practice_54.java.
- Code Editor:** The main editor window displays the content of Practice_43.java. The code prints a pattern of numbers to the console.
- Terminal:** The terminal window shows the command used to run the program and the resulting output.
- Status Bar:** Provides information about the current file (Ln 26, Col 1), encoding (UTF-8), and system status (34°C Sunny).

```
package assignment_6;

//      1
//      12
//      123
//      1234
//      12345

public class Practice_43 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {

            for (int k = 1; k <= 5 - i; k++) {

                System.out.print(" ");
            }
            for (int j = 1; j <= i; j++) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, and Print.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of Java files in the project. The current file is Practice_44.java, which is selected in the editor.
- Editor Area:** Displays the Java code for Practice_44.java. The code prints a pattern of numbers to the console.
- Output Console:** Shows the command used to run the program and the resulting output. The output shows the pattern:

```
server=n,suspend=y,address=localhost:50355' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_44'
      1
      22
      333
      4444
      55555
PS C:\Users\PCLP\Desktop\infobeans>
```

- Bottom Status Bar:** Shows the current line (Ln 21, Col 1), spaces (Spaces: 4), encoding (UTF-8), and file type (Java). It also displays the date and time (09-10-2023) and weather information (34°C Sunny).

```
package assignment_6;

//      1
//      22
//      333
//      4444
//      55555

public class Practice_44 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {

            for (int k = 1; k <= 5 - i; k++) {

                System.out.print(" ");
            }
            for (int j = 1; j <= i; j++) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, and Print.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of open editors and infobeans projects. The 'INFOBEANS' section is expanded, showing files like Practice_40.java through Practice_51.java, with Practice_45.java currently selected.
- Code Editor:** Displays the content of Practice_45.java. The code prints a 5x5 pattern of numbers (5, 44, 333, 2222, 11111) using nested loops.
- Output Console:** Shows the command used to run the program and the resulting output:

```
server=n,suspend=y,address=localhost:50343' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd3d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_45'.
5
44
333
2222
11111
PS C:\Users\PCLP\Desktop\infobeans>
```
- Bottom Status Bar:** Includes information like Ln 21, Col 6, Spaces:4, UTF-8, CRLF, Java, Go Live, and system status (34°C, 1644, 09-10-2023).

```
package assignment_6;

//      5
//     44
//    333
//   2222
//  11111
public class Practice_45 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int k = 1; k <= 5 - i; k++) {
                System.out.print(" ");
            }
            for (int j = 1; j <= i; j++) {
                System.out.print(5 - i + 1);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Path:** assignment_6 > J Practice_46.java
- Code Content:**

```
package assignment_6;

//      A
//      AB
//      ABC
//      ABCD
//      ABCDE

public class Practice_46 {
    public static void main(String[] args) {
        char a = 'A';
        // Rows

        for (int i = 1; i <= 5; i++) {
// space
            for (int k = 1; k <= 5 - i; k++) {
                System.out.print(" ");
            }
            for (int j = 1; j <= i; j++) {
                System.out.print(a);
                a++;
            }
            System.out.println();
            a = 'A';
        }
    }
}
```

- IDE Interface:** The interface includes an Explorer sidebar with files like Practice_40.java through Practice_56.java, a Problems tab showing 111 errors, and a terminal window displaying command-line output.
- Environment:** The system is 34°C, sunny, and the date is 09-10-2023.

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobeans
- Explorer:** Shows multiple Java files in the "OPEN EDITORS" and "INFOBEANS" sections.
- Code Editor:** The active editor contains the code for `Practice_47.java`. The code prints a pattern of numbers and asterisks to the console.
- Terminal:** Shows the command-line output of the program execution.
- Bottom Status Bar:** Includes information like line count, character count, encoding, and date.

```
package assignment_6;

//      1
//      11
//      1*1
//      1**1
//      11111

public class Practice_47 {

    public static void main(String[] args) {
        int j = 1;
        for (int i = 1; i <= 5; i++) {
            for (j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                if (i == 5 || k == 1 || k == i) {
                    System.out.print("1");
                } else {
                    System.out.print("*");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows the Eclipse IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard toolbar icons.
- Search Bar:** Infobeans
- Left Sidebar (EXPLORER):** Shows various Java files under "INFOBEANS".
- Central Area:** Code editor for Practice_48.java. The code prints a pattern of letters A through E.
- Bottom Status Bar:** PROBLEMS (112), OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE.
- Bottom Right:** Weather (34°C Sunny), Date (09-10-2023), Time (16:47), Language (ENG), and Java selection.

```
assignment_6 > J Practice_48.java > Language Support for Java(TM) by Red Hat > Practice_48 > main(String[])
```

```
11 char a = 'A';
12 // rows
13 for (int i = 1; i <= 5; i++) {
14     // space
15     for (int j = 1; j <= 5 - i; j++) {
16         System.out.print(" ");
17     }
18     // print
19     for (int k = 1; k <= i; k++) {
20         if (i == 5 || k == 1 || k == i) {
21             System.out.print(a);
22         } else {
23             System.out.print(" ");
24         }
25     }
26     a++;
27 }
28 System.out.println();
29 a = 'A';
30 }
```

```
package assignment_6;
//      A
//    AB
//   A_C
//  A_D
// ABCDE
public class Practice_48 {
    public static void main(String[] args) {
        char a = 'A';
        // rows
        for (int i = 1; i <= 5; i++) {
            // space
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            // print
            for (int k = 1; k <= i; k++) {
                if (i == 5 || k == 1 || k == i) {
                    System.out.print(a);
                } else {
                    System.out.print(" ");
                }
                a++;
            }
            System.out.println();
            a = 'A';
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Select All, and others.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of Java files under the "OPEN EDITORS" section, including Practice_40.java, Practice_41.java, Practice_42.java, Practice_43.java, Practice_44.java, Practice_45.java, Practice_46.java, Practice_47.java (with 1 edit), Practice_48.java, Practice_49.java (selected), and Practice_50.java.
- Editor:** The main code editor displays the following Java code for Practice_49.java:

```
package assignment_6;

//      1
//      10
//      101
//      1010
//      10101

public class Practice_49 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                if (k % 2 == 0) {
                    System.out.print(0);
                } else {
                    System.out.print(1);
                }
            }
            System.out.println();
        }
    }
}
```

The code prints a right-angled triangle of digits where even columns are 0 and odd columns are 1. The output is as follows:

```
1
10
101
1010
10101
```

Bottom Status Bar: PROBLEMS (112), OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE. The DEBUG CONSOLE tab is selected, showing the command-line interface output:

```
server=n,suspend=y,address=localhost:50381' '-cp 'C:\Users\PCPL\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade\c1e9\bin'\ 'assignment_6.Practice_49'
1
10
101
1010
10101
PS C:\Users\PCPL\Desktop\infobeans>
```

Other status bar items include: Connect, User program finished, Type here to search, 34°C Sunny, 1648, 09-10-2023, and various debug session icons.

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Run | Debug | Run main | Debug main
- Editor:** The code for `Practice_50.java` is displayed. The code prints a right-angled triangle of numbers.

```
public static void main(String[] args) {
    // rows
    for (int i = 5; i >= 1; i--) {
        // space
        for (int j = 1; j <= 5 - i; j++) {
            System.out.print(" ");
        }
        // print
        for (int k = 1; k <= i; k++) {
            System.out.print(k);
        }
        System.out.println();
    }
}
```

- Output:** The terminal output shows the printed pattern:
1234
123
12
1
- Bottom Status Bar:** PS C:\Users\PCLP\Desktop\infobeans
- Bottom Right:** Near record, ENG, 1649, 09-10-2023

The code in the editor is as follows:

```
package assignment_6;

// 1234
// 123
// 12
// 1

public class Practice_50 {

    public static void main(String[] args) {
        // rows
        for (int i = 5; i >= 1; i--) {
            // space
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");

            }
            // print
            for (int k = 1; k <= i; k++) {
                System.out.print(k);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Path:** assignment_6 > J Practice_51.java > Language Support for Java(TM) by Red Hat > Practice_51 > main(String[])
- Code Content:**

```
package assignment_6;

// 55555
// 4444
// 333
// 22
// 1

public class Practice_51 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print(i);
            }
            System.out.println();
        }
    }
}
```

- IDE UI Elements:**
 - Explorer sidebar showing multiple Java files.
 - Problems panel showing 112 issues.
 - Output, Debug Console, Terminal, Ports, SQL Console tabs.
 - Bottom status bar showing file path, line 15, column 43, and system information (34°C, 1649).

The screenshot shows a Java development environment with the following details:

- File Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_50.java, Practice_51.java, Practice_52.java, Practice_54.java, Practice_55.java, Practice_56.java, Practice_57.java, Practice_58.java, Practice_59.java, Practice_60.java, Practice_61.java, Practice_62.java, Practice_63.java, Practice_64.java, and Practice_65.java.
- Code Editor:** The main editor window displays the content of Practice_52.java. The code prints a pattern of numbers and underscores.
- Output Console:** Shows the command "PS C:\Users\PCLP\Desktop\infobeans>" followed by the output of the program: "12345\n1_4\n1_3\n12\n1".
- Terminal:** Shows the command "server=n,suspend=y,address=localhost:50405" and the path "C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbf3e988bddd3d2b8\redhat.java\jdt_ws\infobeans_ade\c1e9\bin\assignment_6.Practice_52".
- Debugging:** A sidebar on the right lists several debug configurations, all labeled "Debug: Pra...".
- System Tray:** Shows icons for battery, signal, and network, along with the date and time (09-10-2023), weather (34°C Sunny), and system status (1650).

```
package assignment_6;

// 12345
// 1_4
// 1_3
// 12
// 1

public class Practice_52 {

    public static void main(String[] args) {
        int j;
        for (int i = 5; i >= 1; i--) {
            for (j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                if ((i == 4 && k == 2) || (i == 4 && k == 3) || (i == 3 && k == 2)) {
                    System.out.print("_");
                } else {
                    System.out.print(k);
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_51.java, Practice_52.java, Practice_53.java, Practice_54.java, Practice_55.java, Practice_56.java, Practice_57.java, Practice_58.java, Practice_59.java, Practice_60.java, Practice_61.java, Practice_62.java, Practice_63.java, and Practice_64.java.
- Code Editor:** The current file is Practice_53.java. The code prints a pattern of numbers based on user input. It uses nested loops to print rows of numbers from 1 to 5. For each row, it prints spaces followed by a sequence of numbers. The sequence starts at 4 for the first row and decreases by 1 for each subsequent row (4, 3, 2, 1). Within each row, it prints underscores for specific positions (2nd, 4th, and 5th) and the number itself for other positions.
- Terminal:** The terminal window shows the command used to run the program: `server=n,suspend=,address=localhost:50412' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfae988badd3d2b8\redhat.java\dt_w\infobeans_ade7c1e9\bin' 'assignment_6.Practice_53'`.
- Status Bar:** The status bar indicates the file is PS C:\Users\PCLP\Desktop\infobeans, Line 6, Col 9, Spaces: 4, UTF-8, CRLF, Java, Go Live, 34°C Sunny, 1650, 09-10-2023.

```
package assignment_6;

// 55555
// 4_4
// 3_3
// 22
// 1

public class Practice_53 {

    public static void main(String[] args) {
        int j;
        for (int i = 5; i >= 1; i--) {
            for (j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                if ((i == 4 && k == 2) || (i == 4 && k == 3) || (i == 3 && k == 2)) {
                    System.out.print("_");
                } else {
                    System.out.print(i);
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Explorer:** Shows multiple Java files in the workspace, including Practice_51.java, Practice_52.java, Practice_53.java, Practice_54.java (the active file), and several others like Practice_50.java through Practice_63.java.
- Code Editor:** The main window displays the content of Practice_54.java. The code prints a pattern of characters based on user input. It uses nested loops to determine the character to print ('A', 'B', 'C', 'D', or '_') based on the row and column indices.
- Terminal:** The terminal window shows the command used to run the program: `server=n,suspend=,address=localhost:50418' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88baddd32d2b8\redhat.java\dt_ws\infobeans_ade7c1e9\bin' 'assignment_6.Practice_54'`.
- Output:** The output window shows the printed pattern: `A_D
A_C
AB
A`.
- Debug View:** A sidebar on the right lists multiple debug configurations for Practice_54.java.
- System Tray:** The taskbar at the bottom includes icons for file explorer, task manager, and various system applications.

```
package assignment_6;

// ABCDE
// A__D
// A_C
// AB
// A

public class Practice_54 {
    public static void main(String[] args) {
        char a = 'A';
        int j;
        for (int i = 5; i >= 1; i--) {
            for (j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                if ((i == 4 && k == 2) || (i == 4 && k == 3) || (i == 3 && k == 2)) {
                    System.out.print("_");
                } else {
                    System.out.print(a);
                }
                a++;
            }
            System.out.println();
            a = 'A';
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Run | Debug | Run main | Debug main
- Editor:** The code for `Practice_55.java` is displayed. The code prints a pattern of characters 'A' to 'E' in a specific nested loop structure.
- Output:** The terminal shows the command run and the output of the program.
- Bottom Status Bar:** L13, Col 15, Spaces: 4, UTF-8, CRLF, Java, Go Live, 34°C Sunny, 1652, 09-10-2023.

```
package assignment_6;

// ABCDE
// ABCD
// ABC
// AB
// A

public class Practice_55 {

    public static void main(String[] args) {
        char a = 'A';
        int temp =5;
        int j;
        for (int i = temp; i >= 1; i--) {
            // for(int i =1;i<=5;i++){
            for (j = 1; j <= temp - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print(a);
                a++;
            }
            System.out.println();
            a = 'A';
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Home, Infobean
- Editor:** The main editor window displays the code for `Practice_56.java`. The code prints a pattern of numbers:assignment_6 > J Practice_56.java > Language Support for Java(TM) by Red Hat > Practice_56 > main(String[])
1 package assignment_6;
2
3 // 11111
4 // 2222
5 // 333
6 // 44
7 // 5
8 public class Practice_56 {
9
10 public static void main(String[] args) {
11 int j;
12 for (int i = 5; i >= 1; i--) {
13 for (j = 1; j <= 5 - i; j++) {
14 System.out.print(" ");
15 }
16 for (int k = 1; k <= i; k++) {
17 System.out.print(j);
18 }
19 System.out.println();
20 }
21}
- Explorer:** Shows a tree view of files in the project, including `INFOBEANS`, `OUTLINE`, `TIMELINE`, `PROJECTS`, `DATABASES`, `CLOUD`, `RUN CONFIGURATION`, and `JAVA PROJECTS`.
- Problems:** Shows 112 issues.
- Output:** Shows the command line output of the run command: `server=n,suspend=y,address=localhost:58431' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbf9e88bddd3d2b8\redhat.java\jdt_ws\infobeanes_ade\c1e9\bin'\ 'assignment_6.Practice_56'` followed by the printed pattern: `11111
2222
333
44
5`.
- Terminal:** Shows the terminal command: `PS C:\Users\PCLP\Desktop\infobeanes>`.
- Ports:** Shows various port configurations.
- SolConsole:** Shows the Java version: `Java 16.53`.
- System Tray:** Shows icons for battery, signal, volume, and system status.
- Bottom Bar:** Shows the current file path: `C:\Users\PCLP\Desktop\infobeanes`, the current line and column: `Ln 21, Col 10`, and the current encoding: `UTF-8`.

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, Find, and Run.
- Search Bar:** Infobeans
- Explorer:** Shows a tree view of Java files under "INFOBEANS". The file "J Practice_57.java" is selected.
- Open Editors:** Multiple Java files are listed, including Practice_51.java through Practice_60.java.
- Code Editor:** Displays the content of "Practice_57.java". The code prints a diamond pattern of asterisks. The terminal output shows the resulting diamond shape.
- Terminal:** Shows the command run and the resulting diamond output.
- Bottom Status Bar:** Includes information like "Ln 23, Col 6", "Spaces: 4", "UTF-8", "CRLF", "Java", "Go Live", and system status like "34°C Sunny" and "1653 09-10-2023".

```
package assignment_6;

/*
 * 
 * * *
 * * * * *
 * * * * * 

public class Practice_57 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            // for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= 5 - i; j++) {
                // for (int j = 5 - i; j >= 1; j--) {
                    System.out.print(" ");
                }
            for (int k = 1; k <= i; k++) {
                System.out.print("*" + " ");
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobean
- Explorer:** Shows a list of Java files in the project, including Practice_51.java through Practice_58.java.
- Open Editors:** Practice_58.java is the active editor, displaying the following code:

```
package assignment_6;
public class Practice_58 {
    public static void main(String[] args) {
        int j;
        for (int i = 1; i <= 5; i++) {
            for (j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print(k + " ");
            }
            System.out.println();
        }
    }
}
```

The code prints a diamond-shaped pattern of numbers. The output in the terminal is:

```
server=n,suspend=y,address=localhost:58445' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd3d2b8\redhat.java\jdt_ws\infobean_ade7c1e9\bin'\ 'assignment_6.Practice_58'
      1
     1 2
    1 2 3
   1 2 3 4
  1 2 3 4 5
PS C:\Users\PCLP\Desktop\infobean>
```

The IDE interface includes a Problems view (112 errors), an Output view, a Timeline, Projects, Databases, Cloud, Run Configuration, Java Projects, and various status indicators at the bottom right.

```
package assignment_6;

//      A
//      A B
//      A B C
//      A B C D
//      A B C D E
public class Practice_59 {

    public static void main(String[] args) {
        char a = 'A';
        for (int i = 1; i <= 5; i++) {
for(int j =1;j<=5-i;j++){
            System.out.print(" ");
        }
        for (int k = 1; k <= i; k++) {
            System.out.print(a + " ");
            a++;
        }
        System.out.println();
        a = 'A';
    }
}
}
```

```
package assignment_6;

//      X
//      X X
//      X_X
//      X__X
//      X___X
//      X_X_X_X_X

public class Practice_60 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                if ((i == 3 && k == 2) || (i == 4 && k == 2) || (i == 4 && k == 3)) {
                    System.out.print("_ ");
                } else {
                    System.out.print("X" + " ");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows a tree view of Java files under the INFOBEANS project, including Practice_61.java, Practice_62.java, Practice_63.java, Practice_64.java, Practice_65.java, Practice_66.java, Practice_67.java, Practice_68.java, Practice_69.java, Practice_70.java, Practice_71.java, Practice_72.java, Practice_73.java, Practice_74.java, Practice_76.java, and Practice_77.java.
- Editor:** The main editor window displays the code for Practice_61.java. The code prints a diamond pattern of asterisks (*). The code is as follows:

```
package assignment_6;

/*
 * *****
 * *** *
 * ** *
 * * *
 * *****
 */

public class Practice_61 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");

            }
            for (int k = 1; k <= i; k++) {
                System.out.print("*" + " ");
            }
            System.out.println();
        }

    }
}
```

The code is annotated with comments and symbols to indicate the structure of the diamond pattern being printed.

Terminal: The terminal window shows the command run and the output of the program:

```
server=n,suspend=y,address=localhost:58465' `cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_61'
*
*
*
*
*
PS C:\Users\PCLP\Desktop\infobeans>
```

Bottom Status Bar: Shows the current line (Ln 14), column (Col 39), spaces (Spaces: 4), encoding (UTF-8), and file type (Java). It also displays the date and time (09-10-2023), weather (34°C Sunny), and language (ENG).

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the workspace, including Practice_61.java, Practice_62.java, Practice_63.java, Practice_64.java, Practice_65.java, Practice_66.java, Practice_67.java, Practice_68.java, Practice_69.java, Practice_70.java, Practice_71.java, Practice_72.java, Practice_73.java, Practice_74.java, and Practice_76.java.
- Editor:** The main editor window displays the code for Practice_62.java. The code prints a pattern of numbers to the console.
- Output:** The terminal output shows the execution command and the printed pattern.
- Problems:** 112 problems are listed in the Problems view.
- Run Configuration:** Multiple run configurations for Practice_62 are listed in the bottom right corner.
- System Status:** 34°C Sunny, 1659, 09-10-2023.

```
package assignment_6;

//      1
//      123
//      12345
//      1234567
//      123456789

public class Practice_62 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (i * 2 - 1); k++) {
                System.out.print(k + " ");
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the "OPEN EDITORS" and "INFOBEANS" sections.
- Code Editor:** The current file is "Practice_63.java". The code prints a pattern of characters A through H. The output window shows the following pattern:

```
A  
A B C  
A B C D E  
A B C D E F G  
A B C D E F G H I
```
- Output Window:** Displays the command run and the resulting output:

```
server=n,suspend=y,address=localhost:58478' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbf9e88baddd3d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_63'  
A  
A B C  
A B C D E  
A B C D E F G  
A B C D E F G H I  
PS C:\Users\PCLP\Desktop\infobeans>
```
- Status Bar:** Ln 8, Col 27, Spaces: 4, UTF-8, CRLF, Java, Go Live, 34°C Sunny, 1659, 09-10-2023

```
package assignment_6;

//      A
//      ABC
//      ABCDE
//      ABCDEEF
//      ABCDEFGHI

public class Practice_63 {

    public static void main(String[] args) {
        char a = 'A';

        for (int i = 1; i <= 5; i++) {
            for (int k = 1; k <= 5 - i; k++) {
                System.out.print(" ");
            }
            for (int j = 1; j <= (i * 2 - 1); j++) {
                System.out.print(a + " ");
                a++;
            }
        }
        System.out.println();
        a = 'A';
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Select All, and Run.
- Search Bar:** Infobeans
- Explorer:** Shows multiple Java files in the "OPEN EDITORS" and "INFOBEANS" sections.
- Code Editor:** Displays the following Java code:

```
package assignment_6;

/*
 * *
 * _ *
 *   _ *
 *     *
 */
public class Practice_64 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (2 * i - 1); k++) {
                if ((k == 1 || k == (2 * i) - 1 || i == 5)) {
                    System.out.print("*");
                } else {
                    System.out.print("_");
                }
            }
            System.out.println();
        }
    }
}
```

The code prints a diamond shape using asterisks (*) and underscores (_). The pattern has 5 rows. The first row has 1 underscore. The second row has 2 underscores. The third row has 3 underscores. The fourth row has 2 underscores. The fifth row has 1 underscore. The center of the diamond has 5 asterisks.

Output Console: Shows the command run and the resulting diamond pattern.

```
server=n,suspend=y,address=localhost:58496' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_64'
*
* -
*   _ *
*     *
*****
PS C:\Users\PCLP\Desktop\infobeans>
```

Bottom Status Bar: L8, Col 27, Spaces:4, UTF-8, CRLF, Java, Go Live, 34°C Sunny, 17:00, 09-10-2023

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the workspace, including Practice_61.java, Practice_62.java, Practice_63.java, Practice_64.java, and Practice_65.java.
- Open Editors:** Practice_65.java is the active editor, displaying the following code:

```
package assignment_6;

//      1
//      1 1
//      1 2 1
//      1 3 3 1
//      1 4 6 4 1

public class Practice_65 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }

            for (int k = 1; k <= i; k++) {
                if (i == 1 || k == 1) {
                    System.out.print(1);
                } else {
                    System.out.print(" " + (i - k + 1));
                }
            }

            System.out.println();
        }
    }
}
```

The code prints a diamond-shaped pattern of numbers. The output is as follows:

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

Output Console: Shows the command run and the resulting output:

```
server=n,suspend=y,address=localhost:50504' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfae88bddd3d2b8\redhat.java\jdt_ws\infobeans_ade\c1e9\bin'\ 'assignment_6.Practice_65'
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
PS C:\Users\PCLP\Desktop\infobeans>
```

Bottom Status Bar: Shows the current line (Ln 23, Col 34), spaces (Spaces: 4), encoding (UTF-8), and date/time (09-10-2023).

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Run | Debug | Run main | Debug main
- Editor:** The code for `Practice_66.java` is displayed. The code prints a pattern of spaces and asterisks to the console.
- Output:** The terminal shows the output of the program:server@n:suspend\$ address=localhost:50510' '-cp' 'C:/Users/PCLP/AppData/Roaming/Code/User/workspaceStorage\9bd1afcd4Sae5dbfae88bddd3d2b8/redhat.java/jdt_ws/infobeans_ade7c1e9/bin' 'assignment_6.Practice_66'
 1
 1*1
 1***1
 1*****1
 1111111111
- Bottom Status Bar:** Ln 9, Col 1, Spaces:4, UTF-8, CRLF, Java, Go Live, USD/INR +0.15%, ENG, 17:01, 09-10-2023

```
package assignment_6;

//      1
//      1*1
//      1***1
//      1*****1
//      1111111111

public class Practice_66 {

    public static void main(String[] args) {
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (2 * i) - 1; k++) {
                if (k == 1 || k == (2 * i) - 1 || i == 5) {
                    System.out.print(1);
                } else {
                    System.out.print("*");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** Infobeans
- Editor Area:** The code for `Practice_67.java` is displayed. The code prints a pattern of characters A through E.

```
package assignment_6;

//      A
//      B B
//      C   C
//      D   D
//      EEEEEEE

public class Practice_67 {

    public static void main(String[] args) {
        char a = 'A';
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (2 * i) - 1; k++) {
                if (k == 1 || i == 5 || k == (2 * i) - 1) {
                    System.out.print(a);
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
            a++;
        }
    }
}
```

- Output Console:** Shows the output of the program being run in a terminal window.

```
fa9e88badd32d2b8\redhat.java\jdt_vs\infobeans_ade7c1e9\bin' 'assignment_6.Practice_67'
A
B B
C   C
D   D
EEEEEEE
PS C:\Users\PCLP\Desktop\infobeans> ^C
PS C:\Users\PCLP\Desktop\infobeans>
```

- Bottom Status Bar:** Ln 2, Col 8, Spaces:4, UTF-8, CRLF, Java, Go Live, USD/INR +0.15%, ENG, 17:02, 09-10-2023

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Run | Debug | Run main | Debug main
- Editor:** The code for `Practice_68.java` is displayed. The code prints a pattern of spaces and asterisks to the console.
- Output Bar:** PROBLEMS (112), OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE.
- Terminal:** PS C:\Users\PCLP\Desktop\infobeans> ^C
PS C:\Users\PCLP\Desktop\infobeans>
- Status Bar:** Ln 14, Col 39 Spaces:4 UTF-8 CRLF {} Java Go Live 34°C Sunny 17:03 09-10-2023

```
package assignment_6;

//      #
//      *#*
//      **#**
//      ***#***
//      ****#****

public class Practice_68 {

    public static void main(String[] args) {
        int j;
        for (int i = 1; i <= 5; i++) {
            for (j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i ; k++) {
                if (j == 5) {
                    System.out.print("#");
                } else {
                    System.out.print("*");
                }
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the workspace, including Practice_61.java through Practice_69.java.
- Open Editors:** Practice_69.java is the active editor, displaying the following code:

```
package assignment_6;

// *****
// ****
// ***
// *

public class Practice_69 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for(int k =1;k<=5-i;k++){
                System.out.print(" ");
            }
            for (int j = 1; j <= i; j++) {
                System.out.print("*" + " ");
            }
            System.out.println();
        }
    }
}
```

The code prints a right-angled triangle of asterisks. The first row has 5 spaces followed by 1 asterisk. The second row has 4 spaces followed by 2 asterisks. This pattern continues until there is 1 space and 5 asterisks in the last row.

Terminal: Shows the command run and its output:

```
server=n,suspend=y,address=localhost:50528' '-cp 'C:\Users\PCPL\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfa9e88baddd3d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_69'
* * *
* *
* *
* *
*
```

Bottom Status Bar: Includes file navigation (Line 23, Col 1), code style (Spaces: 4, CRLF), Java settings, weather (34°C, Sunny), date (09-10-2023), and time (17:03).

The screenshot shows a Java code editor interface with a terminal window integrated into the bottom bar. The terminal window displays the command used to run the Java application and its output.

```
server=n,suspend=y,address=localhost:50535' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfae88baddd3d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_70'
*****
***+
**+
*+
*
package assignment_6;

// * * * * *
// * * * *
// * * *
// * *
// *

public class Practice_70 {

    public static void main(String[] args) {

        for (int i = 5; i >= 1; i--) {
            for(int k =1;k<=5-i;k++){
                System.out.print(" ");
            }
            for (int j = 1; j <= i; j++) {
                System.out.print("*");
            }
            System.out.println();
        }

    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

```
server=n,suspend=y,address=localhost:50535' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbfae88baddd3d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin'\ 'assignment_6.Practice_70'
*****
***+
**+
*+
*
PS C:\Users\PCLP\Desktop\infobeans>
```

Ln 22, Col 6 Spaces:4 UTF-8 CRLF {} Java Go Live 17:04 Near record ENG 09-10-2023

The screenshot shows a Java development environment with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Explorer:** Shows multiple Java files in the "INFOBEANS" folder, including Practice_69.java, Practice_70.java, Practice_71.java (selected), Practice_72.java, Practice_73.java, Practice_74.java, Practice_76.java, Practice_77.java, Practice_78.java, Practice_79.java, Practice_80.java, Practice_81.java, Practice_82.java, and Practice_84.java.
- Code Editor:** The main editor window displays the code for Practice_71.java. The code prints a pattern of numbers to the console. The output in the terminal shows:

```
server=n,suspend=y,address=localhost:58541' '-cp 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd4Sae5dbf9e988baddd32d2b8\redhat.java\jdt_ws\infobeans_ade\c1e9\bin'\ 'assignment_6.Practice_71'
123456789
1234567
12345
123
1

public class Practice_71 {
```
- Terminal:** The terminal shows the command run and the output of the program.
- Bottom Status Bar:** Includes file navigation (3, 109, 0), a connect button, user program finished, and system information (Near record, ENG, 17:04, 09-10-2023).

The screenshot shows the Eclipse IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Back, Forward, Search bar, Minimize, Maximize, Close.
- Left Sidebar (EXPLORER):** Shows various Java files under "OPEN EDITORS" and "INFOBEANS".
- Central Editor:** Displays the content of Practice_72.java.
- Bottom Status Bar:** PROBLEMS (112), OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE.
- Bottom Taskbar:** Shows the current workspace path: C:\Users\PCLP\Desktop\infobeans>.
- Bottom Right:** Weather (34°C, Sunny), Date (09-10-2023), Time (17:05).

```
package assignment_6;

//      A B C D E
//      A B C D
//      A B C
//      A B
//      A

public class Practice_72 {

    public static void main(String[] args) {
        char j;
        for (char i = 'E'; i >= 'A'; i--) {
            for (j = 'A'; j <= 'E'-i; j++) {
                System.out.print(" ");
            }
            for (char k = 'A'; k <= i; k++) {
                System.out.print(k+ " ");
            }
            System.out.println();
        }
    }
}
```

The screenshot shows the Red Hat Java IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Open, Save, Find, and Run.
- Search Bar:** Infobean
- Explorer:** Shows a tree view of Java files under INFOBEANS, including Practice_69.java, Practice_70.java, Practice_71.java, Practice_72.java, Practice_73.java, Practice_74.java, Practice_76.java, Practice_77.java, Practice_78.java, Practice_79.java, Practice_80.java, Practice_81.java, Practice_82.java, and Practice_84.java.
- Open Editors:** Practice_71.java, Practice_72.java, and Practice_73.java (highlighted).
- Code Editor:** Displays the code for Practice_73.java. The code prints a pattern of numbers:package assignment_6;

// 5 5 5 5 5
// 4 4 4 4
// 3 3 3
// 2 2
// 1

public class Practice_73 {

 public static void main(String[] args) {
 for (int i = 5; i >= 1; i--) {
 for (int j = 1; j <= 5 - i; j++) {
 System.out.print(" ");
 }
 for (int k = 1; k <=i; k++) {

 System.out.print(i+" ");
 }
 System.out.println();
 }
 }
}
- Output:** Shows the terminal output of the program execution.
- Bottom Status Bar:** Includes icons for file operations, a search bar, system status (34°C, 17:05, 09-10-2023), and language settings (ENG).

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Infobeans
- Explorer:** Shows multiple Java files in the workspace, with `J Practice_74.java` currently selected.
- Editor:** Displays the code for `Practice_74.java`. The code prints a pattern of numbers to the console. The output window shows the results for `i=5`.
- Output Window:** Shows the command used to run the program and the resulting output.
- Terminal:** Shows the command `PS C:\Users\PCLP\Desktop\infobeans>`.
- Problems:** 112 issues found.
- Debugging:** Multiple debug configurations listed in the sidebar.
- Bottom Status Bar:** Includes file status (3 files, 109 lines), search bar, system tray icons, weather (34°C, sunny), date (09-10-2023), and time (17:06).

```
package assignment_6;

// 123456789
//   1     7
//   1     5
//   1     3
//       1

public class Practice_74 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= 5 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (2 * i) - 1; k++) {

                System.out.print(k);
            }

            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for file operations like Open, Save, Find, and Run.
- Search Bar:** Infobeans
- Editor Area:** Displays the code for `Practice_76.java`. The code prints a pattern of 'x' characters. The output in the terminal shows:

```
X
XX
XXX
XXXX
XXX
XX
X
```
- Code Content:**

```
package assignment_6;

// X
// XX
// XXX
// XXXX
// XXX
// XX
// X

public class Practice_76 {

    public static void main(String[] args) {
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print("x");
            }
            System.out.println("");
        }
        for (int i = 3; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                System.out.print("x");
            }
            System.out.println();
        }
    }
}
```
- Explorer:** Shows multiple Java files in the project, including `Practice_71.java`, `Practice_72.java`, `Practice_73.java`, `Practice_74.java`, `Practice_76.java`, `Practice_69.java`, `Practice_70.java`, `Practice_71.java`, `Practice_72.java`, `Practice_73.java`, `Practice_74.java`, `Practice_76.java`, `Practice_77.java`, `Practice_78.java`, `Practice_79.java`, `Practice_80.java`, `Practice_81.java`, and `Practice_82.java`.
- Problems:** 112 issues found.
- Output:** PS C:\Users\PCLP\Desktop\infobeans>
- Terminal:** Ln 8, Col 5 Spaces:4 UTF-8 CRLF Java Go live
- Debug:** Multiple debug configurations listed.
- System Status:** 34°C Sunny 17:06 09-10-2023

The screenshot shows a Java code editor interface with the following details:

- File Explorer:** Shows multiple Java files in the "OPEN EDITORS" and "INFOBEANS" sections.
- Editor:** The main editor window displays the code for `Practice_77.java`. The code prints a pattern of numbers to the console.
- Bottom Status Bar:** Shows the file path `C:\Users\PCLP\Desktop\infobeans>`, line `Ln 9, Col 1`, and other system information like temperature and date.
- Code Content:**

```
package assignment_6;

// 1
// 12
// 123
// 1234
// 123
// 12
// 1

public class Practice_77 {

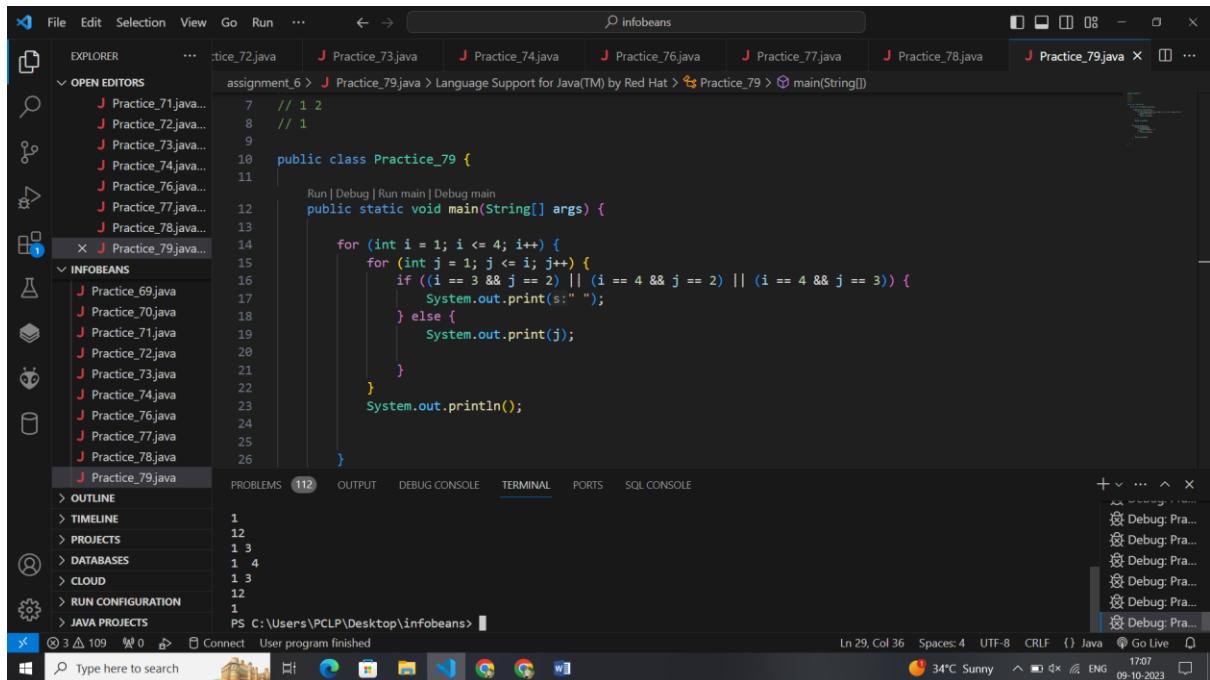
    public static void main(String[] args) {
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print(j);
            }
            System.out.println();
        }
        for (int i = 3; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with a dark theme. The code in the editor is as follows:

```
package assignment_6;

public class Practice_78 {
    public static void main(String[] args) {
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= 4 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print(k);
            }
            System.out.println();
        }
        for (int i = 3; i >= 1; i--) {
            for (int j = 1; j <= 4 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print(k);
            }
            System.out.println();
        }
    }
}
```

The code defines a class named `Practice_78` which contains a `main` method. The `main` method prints a pattern of spaces and numbers to the console. The pattern consists of two nested loops: an outer loop from `i = 1` to `4` and an inner loop from `j = 1` to `4 - i`. Inside the inner loop, a space is printed. After the inner loop, a row of numbers is printed, starting from `1` up to `i`, followed by a new line. This pattern repeats for `i = 3, 2, 1`, printing rows from `1` to `3`, `1` to `2`, and finally `1`.



```
package assignment_6;
// 1
// 1 2
// 1 3
// 1 4
// 1 3
// 1 2
// 1
public class Practice_79 {
    public static void main(String[] args) {
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= i; j++) {
                if ((i == 3 && j == 2) || (i == 4 && j == 2) || (i == 4 &&
j == 3)) {
                    System.out.print(" ");
                } else {
                    System.out.print(j);
                }
            }
            System.out.println();
        }
        for(int i= 3;i>=1;i--){
            for(int j =1;j<=i;j++){
                if((i==3 && j==2)){
                    System.out.print(" ");
                }else{
                    System.out.print(j); }
            }
            System.out.println();
        }}}
```

The screenshot shows a Microsoft Visual Studio Code (VS Code) interface with the following details:

- File Explorer:** Shows a tree view of files and projects. The current file is `J Practice_80.java`. Other files listed include `J Practice_69.java`, `J Practice_70.java`, `J Practice_71.java`, `J Practice_72.java`, `J Practice_73.java`, `J Practice_74.java`, `J Practice_76.java`, `J Practice_77.java`, `J Practice_78.java`, `J Practice_79.java`, `J Practice_80.java`, `J Practice_81.java`, `J Practice_82.java`, `J Practice_84.java`, `> Class_Work`, `> ITEP_Java`, and `> Assignment_2.pdf`.
- Editor:** Displays the Java code for `Practice_80`. The code prints a diamond pattern of asterisks and underscores to the console.
- Bottom Status Bar:** Shows the path `PS C:\Users\PCLP\Desktop\infobeans>`, line 11, column 1, spaces: 4, encoding: UTF-8, and date/time: 09-10-2023.

```
package assignment_6;

/*
 */
public class Practice_80 {
    public static void main(String[] args) {
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= 4 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print("*_" + "");
            }
            System.out.println();
        }
        for (int i = 3; i >= 1; i--) {
            for (int j = 1; j <= 4 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print("*_" + " ");
            }
            System.out.println();
        }
    }
}
```

The screenshot shows a Java code editor interface with the following details:

- File Path:** assignment_6 > Practice_81.java
- Code Content:** A Java program that prints a diamond pattern of asterisks (*). The code uses nested loops to print spaces and asterisks based on the current row index (i).

```
package assignment_6;

/*
 * *****
 * ***** 
 * ***** *
 * *****
 * *****
 * *****
 * ****
 * *
 */

public class Practice_81 {
    public static void main(String[] args) {
        for (int i = 1; i <= 4; i++) {
            for (int j = 1; j <= 4 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (2 * i) - 1; k++) {
                System.out.print("*");
            }
            System.out.println();
        }
        for (int i = 3; i >= 1; i--) {
            for (int j = 1; j <= 4 - i; j++) {
                System.out.print(" ");
            }
            for (int k = 1; k <= (2 * i) - 1; k++) {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

The screenshot shows an IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** infobeans
- Left Sidebar:** EXPLORER, OPEN EDITORS (Practice_80.java, Practice_81.java, Practice_82.java), INFOBEANS (Practice_69.java, Practice_70.java, Practice_71.java, Practice_72.java, Practice_73.java, Practice_74.java, Practice_76.java, Practice_77.java, Practice_78.java, Practice_79.java, Practice_80.java, Practice_81.java, Practice_82.java, Practice_84.java), Class_Work.
- Central Area:** Practice_82.java (Language Support for Java(TM) by Red Hat) showing code:

```
assignment_6 > J Practice_82.java > Language Support for Java(TM) by Red Hat > Practice_82 > main(String[])
public static void main(String[] args) {
    for (int i = 1; i <= 4; i++) {
        for (int j = 1; j <= 4 - i; j++) {
            System.out.print(" ");
        }
        for (int k = 1; k <= (2 * i) - 1; k++) {
            if ((i == 3 && k == 2) || (i == 3 && k == 3) || (i == 3 && k == 4) || (i == 2 && k == 2) || (i == 2 && k == 3) || (i == 2 && k == 4)) {
                System.out.print("_");
            } else {
                System.out.print("*");
            }
        }
        System.out.println();
    }
    for(int i=3;i>=1;i--){
        for(int j=1;j<=4-i;j++){
            System.out.print(" ");
        }
        for(int k=1;k<=(2*i)-1;k++){
            if ((i == 3 && k == 2) || (i == 3 && k == 3) || (i == 3 && k == 4) || (i == 2 && k == 2) ) {
                System.out.print("_");
            } else {
                System.out.print("*");
            }
        }
        System.out.println();
    }
}
```
- Bottom Status Bar:** PROBLEMS (112), OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE, PS C:\Users\PCLP\Desktop\infobeans>, In 28, Col 37, Spaces: 4, UTF-8, CRLF, Java, 34°C Sunny, 17:11, 09-10-2023.

```

        System.out.print(" ");
    }
    for(int k =1;k<=(2*i)-1;k++){
        if ((i == 3 && k == 2) || (i == 3 && k == 3) || (i == 3
&& k == 4) || (i == 2 && k == 2) ) {
            System.out.print("_");
        } else {
            System.out.print("*");
        }
    }
    System.out.println();
}

}

```

The screenshot shows a Java development environment with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** Type here to search
- Explorer:** Shows multiple Java files in the workspace, including Practice_80.java, Practice_81.java, Practice_82.java, and Practice_84.java (the active editor).
- Editor:** The code for Practice_84.java is displayed. It contains nested loops that print a sequence of numbers (1, 212, 32123, 4321234, 543212345) followed by a series of underscores and asterisks.
- Output Console:** Displays the command-line output of the program execution.
- Terminal:** PS C:\Users\PCLP\Desktop\infobeans>
- Debugging:** Multiple debug configurations listed in the bottom right corner.
- Status Bar:** Includes information like line count (112), column count (30), encoding (UTF-8), and date/time (09-10-2023).

```

package assignment_6;

//      1
//     212
//    32123
//   4321234
//  543212345

public class Practice_84 {
    public static void main(String[] args) {
        // int i;
        for(int i=1;i<=5;i++)

```

```

{
    for(int s=5-i;s>=1;s--)
    {
        System.out.print(" ");
    }

    for(int j=i;j<=j;j--)
    {
        System.out.print(j);
    }

    for(int k=2;k<=i;k++)
    {
        System.out.print(k);
    }

    System.out.println();
}
}

}

```

The screenshot shows a Java development environment with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for New, Open, Save, Cut, Copy, Paste, Find, Replace, and others.
- Code Editor:** Displays the Java code for `Practice_85.java`. The code prints a diamond shape pattern of asterisks. A yellow dot marker is on line 15, indicating the current line of execution.
- Explorer:** Shows a tree view of open editors, including `Assignment_6`, `INFOBEANS`, and `Class_Work`.
- Output:** Shows the command line output: `PS C:\Users\PCLP\Desktop\infobeans>`
- Status Bar:** Shows file paths, line numbers (Ln 15, Col 14), and system metrics (Spaces: 4, UTF-8, CRLF, Java, Go Live, NIFTY +0.54%, 10:38, 10-10-2023).

```

public class Practice_85 {

    public static void main(String[] args) {

        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print("*");
            }

            System.out.print("  ");

            for (int l = 1; l <= i; l++) {
                System.out.print("*");
            }

            System.out.println();
        }
    }
}

```

The screenshot shows the Eclipse IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard toolbar icons.
- Search Bar:** Infobeans
- Open Editors:** Practice_80.java, Practice_81.java, Practice_82.java, Practice_84.java, Practice_85.java, Practice_86.java (selected), Practice_87.java
- Project Explorer:** Shows multiple Java files under assignment_6.
- Code Editor:** Practice_86.java

```

public class Practice_86 {
    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                System.out.print(s:"*");
            }
            System.out.print(s:" ");

            for (int j = 1; j <= i; j++) {
                System.out.print(s:"*");
            }
            System.out.println();
        }
    }
}

```
- Terminal:** Shows the output of the program:

```

*****
**** ****
*** ***
** **
* *

public class Practice_86 {

```
- Bottom Status Bar:** Ln 23, Col 1, Spaces: 4, UTF-8, CRLF, Java, Go Live, Date: 10-10-2023.

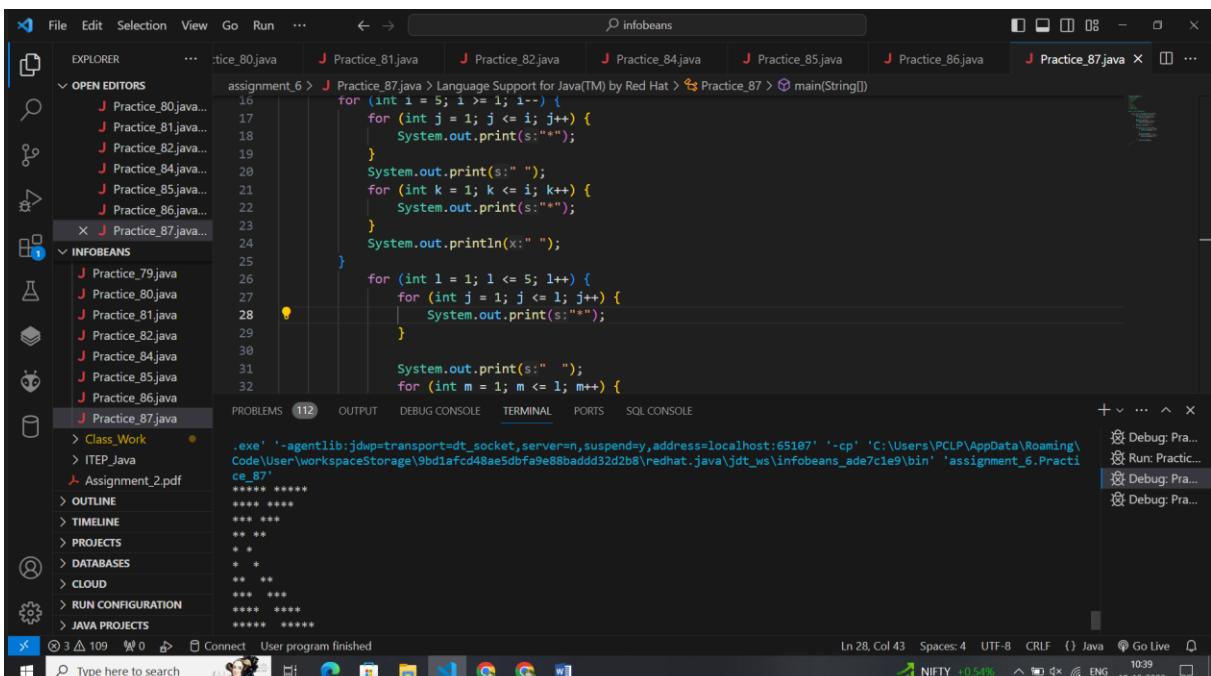
```

public static void main(String[] args) {
    for (int i = 5; i >= 1; i--) {
        for (int j = 1; j <= i; j++) {
            System.out.print("*");
        }
        System.out.print(" ");
    }

    for (int j = 1; j <= i; j++) {
        System.out.print("*");
    }
    System.out.println();
}

}

```



```

File Edit Selection View Go Run ...
OPEN EDITORS J Practice_81.java J Practice_81.java J Practice_82.java J Practice_84.java J Practice_85.java J Practice_86.java J Practice_87.java
INFOBEANS J Practice_79.java J Practice_80.java J Practice_81.java J Practice_82.java J Practice_84.java J Practice_85.java J Practice_86.java J Practice_87.java
PROBLEMS 112 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE
.exe '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:65107' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1aefc48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ae7c1e9\bin' 'assignment_6.Practice_87'
*****
*** ***
** *
* *
** *
*** ***
**** *****
***** *****

Ln 28, Col 43 Spaces: 4 UTF-8 CRLF {} Java Go Live
NIFTY +0.54% 10:39 10-10-2023

```

package assignment_6;

```

// **** * ****
// *** *** *
// ** **
// * *
// * *
// ** **

```

```
// ***
// **** *
// *****



public class Practice_87 {

    public static void main(String[] args) {
        for (int i = 5; i >= 1; i--) {
            for (int j = 1; j <= i; j++) {
                System.out.print("*");
            }
            System.out.print(" ");
            for (int k = 1; k <= i; k++) {
                System.out.print("*");
            }
            System.out.println(" ");
        }
        for (int l = 1; l <= 5; l++) {
            for (int j = 1; j <= l; j++) {
                System.out.print("*");
            }

            System.out.print(" ");
            for (int m = 1; m <= l; m++) {
                System.out.print("*");
            }
        }
        System.out.println();
    }
}
```

The screenshot shows an IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Includes icons for Open, Save, Find, Copy, Paste, etc.
- Search Bar:** infobeans
- Left Sidebar:**
 - EXPLORER: Shows open editors (J Practice_80.java, J Practice_81.java, J Practice_82.java, J Practice_84.java, J Practice_85.java, J Practice_86.java, J Practice_87.java, J Practice_88.java) and a folder named INFOBEANS containing J Practice_82.java, J Practice_84.java, J Practice_85.java, J Practice_86.java, and J Practice_87.java.
 - OPEN EDITORS: Shows J Practice_88.java.
 - PROBLEMS: 112
 - OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE tabs.
 - Outline, Timeline, Projects, Databases, Cloud, Run Configuration, Java Projects sections.
- Code Editor:** The main area displays the Java code for Practice_88.java. The code uses nested loops to print numbers from 1 to 5 in different patterns.

```
package assignment_6;

public class Practice_88 {
    public static void main(String[] args) {
        for(int i =1;i<=4;i++){
            System.out.println(i);
        }
        for(int i =1;i<=5;i++){
            System.out.print(i);
        }
        for(int i = 4;i>=1;i--){
            System.out.print(i);
        }
        for(int i =5;i>=1;i--){
            System.out.println(i);
        }
    }
}
```
- Bottom Status Bar:** PS C:\Users\PCLP\Desktop\infobeans>, Line 17, Col 21, Spaces: 4, UTF-8, CRLF, Java, Go Live, 29°C Sunny, 11:20, 10-10-2023.