

```
281     }
282 }
283
284 public void showSubjects() {
285     System.out.println("Your subjects for the present year are : "+subjects);
286 }
287
288 public void markAttendance() {
289     int a = Integer.parseInt(presentAttendance);
290     a++;
291     presentAttendance = Integer.toString(a);
292     System.out.println("Attendance marked\n");
293 }
```

Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

```
PS D:\Passignments\Project> & 'C:\Users\jaypa\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.4.8-hotspot\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:53735' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\jaypa\AppData\Roaming\Code\User\workspaceStorage\cc67597c0594dd781347b54b0f16e96a\redhat.java\jdt_ws\Project_29e73e37\bin' 'Pp_Project'
```

Shri G.S. Institute of Technology and Science  
Kindly enter your id : JJ1542023E07  
Enter password : passe@107

```
281     }
282 }
283
284 public void showSubjects() {
285     System.out.println("Your subjects for the present year are : "+subjects);
286 }
287
288 public void markAttendance() {
289     int a = Integer.parseInt(presentAttendance);
290     a++;
291     presentAttendance = Integer.toString(a);
292     System.out.println("Attendance marked\n");
293 }
```

Enter password : passe@107  
Authentication Completed  
Please specify the action you want to perform  
1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit

J Pp\_Project.java 3 x Welcome

```
281     }
282 }
283 public void showSubjects() {
284     System.out.println("Your subjects for the present year are : "+subjects);
285 }
286 public void markAttendance() {
287     int a = Integer.parseInt(presentAttendance);
288     a++;
289     presentAttendance = Integer.toString(a);
290     System.out.println("Attendance marked\n");
291 }
292 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Debug: Pp.Project

2

Attendance marked

Please specify the action you want to perform

- 1 : View your information
- 2 : Mark Today's Attendance
- 3 : View present month's attendance
- 4 : Apply for leaves
- 5 : View result of previous year
- 6 : View present year subjects
- 7 : Update your information
- 8 : Change password
- 0 : Exit

Ln 6, Col 26 Spaces: 4 UTF-8 CRLF Java

7:28 PM 11/16/2023

J Pp\_Project.java 3 x Welcome

```
293     }
294 }
295 public void showAttendance() {
296     int a = Integer.parseInt(presentAttendance); presentAttendance = "13"
297     int l = Integer.parseInt(presentleaves);
298     System.out.println("Your present attendance is "+(a+l)+" out of "+a+" days\n");
299 }
300 public void showResult() {
301     System.out.println("Your result for the previous year is : "+result);
302 }
303 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Debug: Pp.Project

PAUSED ON FUNCTION: Student.showAttendance()

Student.showAttendance

Pp\_Project.main(Student)

Thread [R... RUNNING

Thread [F... RUNNING

Thread [S... RUNNING

Thread [A... RUNNING

CALL STACK

Please specify the action you want to perform

- 1 : View your information
- 2 : Mark Today's Attendance
- 3 : View present month's attendance
- 4 : Apply for leaves
- 5 : View result of previous year
- 6 : View present year subjects
- 7 : Update your information
- 8 : Change password
- 0 : Exit

3

Ln 296, Col 1 Spaces: 4 UTF-8 CRLF Java

7:29 PM 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Code Editor:** The main window displays a Java file named `Pp_Project.java`. A breakpoint is set at line 297, which contains the line: `int l = Integer.parseInt(presentleaves); l = 0, presentleaves = "0"`.
- Variables Panel:** On the left, the Variables panel shows a local variable `a` with a value of 13.
- Call Stack:** The Call Stack panel shows the current thread state: `Student.showAttendance()` is PAUSED ON STEP. Other threads listed are `Pp_Project.main()`, `Thread [R...]`, `Thread [F...]`, `Thread [S...]`, and `Thread [A...]`, all in RUNNING state.
- Breakpoints:** The Breakpoints panel lists two breakpoints: one at line 275 and another at line 295, both of which are checked (indicated by a red dot).
- Output:** The terminal output shows a menu of actions:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```
- System Information:** The status bar at the bottom indicates: Line 297, Column 1; Spaces: 4; UTF-8; CRLF; Java; ENG; 7:29 PM; 11/16/2023.

This screenshot shows the Java IDE interface after the code execution has continued past the breakpoint at line 297. The changes observed are:

- Code Editor:** The line of code at line 297 now shows the result of the assignment: `int l = Integer.parseInt(presentleaves); l = 0, presentleaves = "0"`.
- Variables Panel:** The variable `a` is still 13, but a new local variable `l` has been added with a value of 0.
- Call Stack:** The thread state for `Student.showAttendance()` is now `RESUMED`.
- Breakpoints:** The breakpoint at line 295 is no longer highlighted, indicating it has been passed.
- Output:** The terminal output remains the same as in the previous screenshot, displaying the menu of actions.
- System Information:** The status bar at the bottom indicates: Line 298, Column 1; Spaces: 4; UTF-8; CRLF; Java; ENG; 7:29 PM; 11/16/2023.

The screenshot shows a Java debugger interface with the following details:

- Project:** Pp\_Project
- File:** Pp\_Project.java
- Line:** 299
- Method:** showAttendance()
- Variables:** a: 13, l: 0
- Call Stack:** PAUSED ON STEP, showing Student.showAttendance(), Pp\_Project.main(Student@18), Thread [R...], Thread [F...], Thread [S...], Thread [A...].
- Breakpoints:** Pp\_Project.java: 275, Pp\_Project.java: 295 (both checked).
- Output:** Please specify the action you want to perform:
  - 1 : View your information
  - 2 : Mark Today's Attendance
  - 3 : View present month's attendance
  - 4 : Apply for leaves
  - 5 : View result of previous year
  - 6 : View present year subjects
  - 7 : Update your information
  - 8 : Change password
  - 0 : Exit
- Terminal:** Your present attendance is 13 out of 13 days
- Bottom:** Status bar: In 299, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:29 PM | 11/16/2023

The screenshot shows a Java debugger interface with the following details:

- Project:** Pp\_Project
- File:** Pp\_Project.java
- Line:** 276
- Method:** getLeaves()
- Variables:** Student@18
- Call Stack:** PAUSED ON FUNCTION, showing Student.getLeaves(), Pp\_Project.main(Student@18), Thread [R...], Thread [F...], Thread [S...], Thread [A...].
- Breakpoints:** Pp\_Project.java: 275, Pp\_Project.java: 295 (both checked).
- Output:** Please specify the action you want to perform:
  - 1 : View your information
  - 2 : Mark Today's Attendance
  - 3 : View present month's attendance
  - 4 : Apply for leaves
  - 5 : View result of previous year
  - 6 : View present year subjects
  - 7 : Update your information
  - 8 : Change password
  - 0 : Exit
- Terminal:** System.out.println("Please choose a valid option\n");
- Bottom:** Status bar: In 276, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:39 PM | 11/16/2023

```
System.out.println(x:"Please choose a valid option\n");
break;
}
}
public void getLeaves() {
    System.out.print(s:"How many leaves you want : ");
    int s = sc.nextInt(); sc = Scanner@26 "java.util.Scanner[delimiters=\p{javaWhitespace}+][position=0][match valid=false][n
    int l = Integer.parseInt(presentleaves);
    l -= s;
    presentleaves = Integer.toString(l);
    System.out.println(x:"Leaves granted\n");
}
```

The screenshot shows a Java application running in a debugger. A breakpoint is set on line 275. The code is as follows:

```
System.out.println(x:"Please choose a valid option\n");
break;
}
}
public void getLeaves() {
    System.out.print(s:"How many leaves you want : ");
    int s = sc.nextInt(); sc = Scanner@26 "java.util.Scanner[delimiters=\p{javaWhitespace}+][position=0][match valid=false][n
    int l = Integer.parseInt(presentleaves);
    l -= s;
    presentleaves = Integer.toString(l);
    System.out.println(x:"Leaves granted\n");
}
```

The terminal output shows the application prompting for input:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```

The user has typed "5" and pressed Enter.

```
s: 5
}
}
public void getLeaves() {
    System.out.print(s:"How many leaves you want : ");
    int s = sc.nextInt(); s = 5, sc = Scanner@26 "java.util.Scanner[delimiters=\p{javaWhitespace}+][position=1][match valid=t
    int l = Integer.parseInt(presentleaves); presentleaves = "0"
    l -= s;
    presentleaves = Integer.toString(l);
    System.out.println(x:"Leaves granted\n");
}
```

The screenshot shows the Java application still running in the debugger. The variable "s" is now 5. The code is as follows:

```
s: 5
}
}
public void getLeaves() {
    System.out.print(s:"How many leaves you want : ");
    int s = sc.nextInt(); s = 5, sc = Scanner@26 "java.util.Scanner[delimiters=\p{javaWhitespace}+][position=1][match valid=t
    int l = Integer.parseInt(presentleaves); presentleaves = "0"
    l -= s;
    presentleaves = Integer.toString(l);
    System.out.println(x:"Leaves granted\n");
}
```

The terminal output shows the application prompting for input again:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```

The user has typed "5" and pressed Enter.

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 (highlighted), Welcome
- VARIABLES:** Local (s: 5, l: 0, > this: Student@10), Watch
- Breakpoints:** A red dot marks a breakpoint at line 275.
- Code:** The code includes a loop for choosing a valid option and a method getLeaves() that prints "How many leaves you want : " and reads input from the user.
- Terminal:** Shows the command "How many leaves you want : 5".
- Bottom Status:** Line 279, Col 1, Spaces: 4, UTF-8, CRLF, Java, 7:30 PM, 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 (highlighted), Welcome
- VARIABLES:** Local (s: 5, l: -5, > this: Student@10), Watch
- Breakpoints:** A red dot marks a breakpoint at line 275.
- Code:** The code includes a loop for choosing a valid option and a method getLeaves() that prints "How many leaves you want : " and reads input from the user.
- Terminal:** Shows the command "How many leaves you want : 5".
- Bottom Status:** Line 280, Col 1, Spaces: 4, UTF-8, CRLF, Java, 7:31 PM, 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Project:** Pp\_Project
- File:** Pp\_Project.java
- Breakpoint:** A red dot marks line 275: `System.out.println("Please choose a valid option\n");`
- Variables:** Local variables `s: 5` and `l: -5` are listed.
- Call Stack:** The stack shows the current thread is `Student.getLeaves()`, which is **PAUSED ON STEP**. Other threads are listed as **RUNNING**.
- Breakpoints:** Two breakpoints are set: one at line 275 and another at line 295.
- Output:** The terminal shows the user input "How many leaves you want : 5".
- Bottom Status:** Line 281, Col 1, Spaces: 4, UTF-8, CRLF, Java, 7:31 PM, 11/16/2023.

The screenshot shows the Java IDE interface after the execution has continued:

- File:** Pp\_Project.java
- Breakpoint:** A red dot marks line 275: `System.out.println("Please choose a valid option\n");`
- Variables:** Local variables `s: 5` and `l: -5` are listed.
- Call Stack:** The stack shows the current thread is `Student.getLeaves()`, which is **PAUSED ON STEP**. Other threads are listed as **RUNNING**.
- Breakpoints:** Two breakpoints are set: one at line 275 and another at line 295.
- Output:** The terminal shows the user input "How many leaves you want : 5" followed by the output "Leaves granted".
- Bottom Status:** Line 282, Col 1, Spaces: 4, UTF-8, CRLF, Java, 7:31 PM, 11/16/2023.

The screenshot shows a Java application running in a debugger. The code editor displays a main method with several switch statements. A yellow selection bar highlights the code from line 67 to line 75. The terminal window shows the user's input and the program's output, including a menu of options numbered 1 through 8. The call stack shows the current thread and other running threads. The variables and breakpoints panes are also visible.

```
stu.showAttendance(); stu = Student@10
break;
case 4 :
    System.out.println();
    stu.getLeaves(); stu = Student@10
break;
case 5 :
    System.out.println();
    stu.showResult();
break;
case 6 :
    System.out.println();
    stu.showSubjects();
break;

1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```

This screenshot shows the same Java application at a later point in execution. The code editor has moved to line 38. The terminal window now displays a menu with options 1 through 8, and the user has entered option 5. The call stack, variables, and breakpoints panes remain visible.

```
Student stu = new Student(e_id, e_pass, line=br.readLine(), line=br.readLine(), line=br.readLine(),
line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine(),
(line=br.readLine()), (line=br.readLine()), line=br.readLine(), (line=br.readLine()));

boolean flag = true; flag = true
while(flag == true) { flag = true
System.out.println(x:"\nPlease specify the action you want to perform");
System.out.println(x:"1 : View your information");
System.out.println(x:"2 : Mark Today's Attendance");
System.out.println(x:"3 : View present month's attendance");
System.out.println(x:"4 : Apply for leaves");
System.out.println(x:"5 : View result of previous year");
```

The screenshot shows a Java IDE interface with a dark theme. The main window displays a Java file named `Pp_Project.java`. The code is a switch statement with four cases. The fourth case has been selected in the code editor. The IDE's left sidebar contains a 'VARIABLES' section with local variables like `args`, `sc`, and `e_id`, and a 'WATCH' section. Below the code editor is a 'CALL STACK' panel showing multiple threads all in a 'RUNNING' state. The 'BREAKPOINTS' section at the bottom lists breakpoints for two files, with the one at line 275 in `Pp_Project.java` being checked. A terminal window below the call stack shows a menu of options from 1 to 8, with option 3 highlighted. The status bar at the bottom right indicates the line is 61, column 1, and the date and time are 11/16/2023, 7:32 PM.

This screenshot shows the same Java IDE interface, but the code editor now displays a different part of the `Pp_Project.java` file, specifically the `showAttendance()` method. The code includes logic to calculate attendance based on a variable `a`. The IDE's left sidebar and bottom sections are identical to the first screenshot, showing the same variables, call stack, and breakpoints. The terminal window still displays the same menu of options. The status bar at the bottom right shows the line is 296, column 1, and the date and time are 11/16/2023, 7:33 PM.

The screenshot shows a Java IDE interface with a code editor and various toolbars. The code editor displays a file named `Pp_Project.java` with the following content:

```
a: 13
presentAttendance = Integer.toString(a);
System.out.println("Attendance marked\n");
}
public void showAttendance() {
    int a = Integer.parseInt(presentAttendance); a = 13, presentAttendance = "13"
    int l = Integer.parseInt(presentleaves); presentleaves = "-5"
    System.out.println("Your present attendance is "+(a+l)+" out of "+a+" days\n");
}
public void showResult() {
    System.out.println("Your result for the previous year is : "+result);
}
```

The code editor has a yellow highlight over the line `int l = Integer.parseInt(presentleaves); presentleaves = "-5"`. The status bar at the bottom indicates the line number is 297.

The left sidebar contains a Variables panel showing `a: 13` and a Watch panel. The Call Stack panel shows the current stack trace, and the Breakpoints panel shows two breakpoints set on lines 275 and 295, both of which are checked.

The bottom status bar shows the date and time as 11/16/2023 7:32 PM.

This screenshot is nearly identical to the one above, showing the same `Pp_Project.java` code with the same yellow highlight on line 297. The IDE interface, toolbars, and status bar are also identical, indicating a continuation of the same debug session.

J Pp\_Project.java 3 x Welcome

No Config v

VARIABLES

Local

- a: 13
- l: -5

> this: Student@18

WATCH

CALL STACK

PAUSED ON STEP

Thr... Student.showAttendance()

Pp\_Project.main(St...)

Thread [R... RUNNING

Thread [F... RUNNING

Thread [S... RUNNING

Thread [A... RUNNING

BREAKPOINTS

- Uncaught Except...
- Caught Exceptions
- Pp\_Project.j... 275
- Pp\_Project.j... 295

Please specify the action you want to perform

- 1 : View your information
- 2 : Mark Today's Attendance
- 3 : View present month's attendance
- 4 : Apply for leaves
- 5 : View result of previous year
- 6 : View present year subjects
- 7 : Update your information
- 8 : Change password
- 0 : Exit

3

Your present attendance is 8 out of 13 days

Ln 299, Col 1 Spaces: 4 UTF-8 CRLF {} Java

7:32 PM 11/16/2023

J Pp\_Project.java 3 x Project

No Config v

VARIABLES

WATCH

CALL STACK

Running

Thread [...] RUNNING

Thread [R... RUNNING

Thread [F... RUNNING

Thread [S... RUNNING

Thread [A... RUNNING

Thread [N... RUNNING

Thread [C... RUNNING

BREAKPOINTS

- Uncaught Except...
- Caught Exceptions
- Pp\_Project.j... 275
- Pp\_Project.j... 295

Shri G.S. Institute of Technology and Science

Kindly enter your id : JJ1542023E07

Enter password : pass@123

Authentication Completed

Please specify the action you want to perform

- 1 : View your information
- 2 : Mark Today's Attendance
- 3 : View present month's attendance
- 4 : Apply for leaves
- 5 : View result of previous year
- 6 : View present year subjects
- 7 : Update your information
- 8 : Change password

Ln 63, Col 1 Spaces: 4 UTF-8 CRLF {} Java

7:48 PM 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 X. The code is paused at line 275. The line contains:

```
System.out.print(s:"How many leaves you want : ");
```
- Sidebar:** Variables, Watch, Call Stack, Breakpoints.
- Call Stack:** PAUSED ON FUNCTION Student.getLeaves().
- Breakpoints:** A red dot marks the breakpoint at line 275. Other breakpoints are marked with a red dot and checked.
- Output:** Authentication Completed. A menu lists options 1 through 8.
- Terminal:** The prompt "How many leaves you want : " is displayed.
- Bottom:** Status bar: Line 276, Column 1; Spaces: 4; UTF-8; CRLF; Java; 7:48 PM; 11/16/2023.

The screenshot shows the Java IDE after the step-over operation (F11) has been performed:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 X. The code is now at line 277. The line contains:

```
int s = sc.nextInt();
```
- Sidebar:** Variables, Watch, Call Stack, Breakpoints.
- Call Stack:** PAUSED ON STEP. The stack trace remains the same.
- Breakpoints:** The breakpoint at line 275 is still marked with a red dot and checked.
- Output:** Authentication Completed. The menu options remain the same.
- Terminal:** The prompt "How many leaves you want : " is displayed.
- Bottom:** Status bar: Line 277, Column 1; Spaces: 4; UTF-8; CRLF; Java; 7:48 PM; 11/16/2023.

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** Shows "Pp\_Project.java 3" as the active file.
- Variables View:** Displays local variables: "s: 5" and "this: Student@10".
- Breakpoints View:** Shows two breakpoints set on lines 275 and 295, both of which are currently active (indicated by a red dot).
- Call Stack:** Shows multiple threads all labeled as "RUNNING".
- Terminal:** Displays the output of the program's execution so far, including the menu options and user input "How many leaves you want : 5".
- Status Bar:** Shows the current line (277), column (Col 1), and encoding (UTF-8). The date and time are also present: 11/16/2023 7:48 PM.

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

- Project Bar:** Shows "Pp\_Project.java 3" as the active file.
- Variables View:** Displays local variables: "s: 5" and "this: Student@10".
- Breakpoints View:** Shows two breakpoints set on lines 275 and 295, with the one at 275 currently active.
- Call Stack:** Shows the thread is currently "PAUSED ON STEP" at "Student.getLeaves()".
- Terminal:** Displays the output of the program's execution so far, including the menu options and user input "How many leaves you want : 5".
- Status Bar:** Shows the current line (278), column (Col 1), and encoding (UTF-8). The date and time are also present: 11/16/2023 7:48 PM.

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 X. The code is as follows:

```
    System.out.println("Please choose a valid option\n");
}
}

public void getLeaves() {
    System.out.print("How many leaves you want : ");
    int s = sc.nextInt(); s = 5, sc = Scanner@12 "java.util.Scanner[delimiters=\p{javaWhitespace}+][position=1][match valid=t
    int l = Integer.parseInt(presentleaves); l = 0, presentleaves = "0"
    l += s; l = 0, s = 5
    presentleaves = Integer.toString(l);
    System.out.println("Leaves granted\n");
}

    
```

- VARIABLES:** Local variables s: 5, l: 0, > this: Student@10.
- WATCH:** No items listed.
- CALL STACK:** Thread 1 (PAUSED ON STEP) -> Student.getLeaves(), Pp\_Project.main(Student), Thread [R...], Thread [F...], Thread [S...], Thread [A...].
- BREAKPOINTS:** A red dot marks a breakpoint at line 275, which is currently active.
- Terminal:** Displays the prompt "How many leaves you want : 5".
- Bottom Status:** Line 279, Col 1, Spaces: 4, UTF-8, CRLF, Java, 7:48 PM, 11/16/2023.

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 X. The code is as follows:

```
    System.out.println("Please choose a valid option\n");
}
}

public void getLeaves() {
    System.out.print("How many leaves you want : ");
    int s = sc.nextInt(); s = 5, sc = Scanner@12 "java.util.Scanner[delimiters=\p{javaWhitespace}+][position=1][match valid=t
    int l = Integer.parseInt(presentleaves); l = 0, presentleaves = "0"
    l += s; l = 5, s = 5
    presentleaves = Integer.toString(l); presentleaves = "0", l = 5
    System.out.println("Leaves granted\n");
}

    
```

- VARIABLES:** Local variables s: 5, l: 5, > this: Student@10.
- WATCH:** No items listed.
- CALL STACK:** Thread 1 (PAUSED ON STEP) -> Student.getLeaves(), Pp\_Project.main(Student), Thread [R...], Thread [F...], Thread [S...], Thread [A...].
- BREAKPOINTS:** A red dot marks a breakpoint at line 280, which is currently active.
- Terminal:** Displays the prompt "How many leaves you want : 5".
- Bottom Status:** Line 280, Col 1, Spaces: 4, UTF-8, CRLF, Java, 7:48 PM, 11/16/2023.

The screenshot shows a Java debugger interface with the following details:

- Project:** Pp\_Project
- File:** Pp\_Project.java
- Breakpoint:** A red dot marks line 275: `System.out.println(x:"Please choose a valid option\n");`
- Variables:** Local variables include `s: 5`, `l: 5`, and `stu: Student@10`.
- Watch:** No items are listed.
- Call Stack:** Shows the current stack trace:

```
PAUSED ON STEP
    Student.getLeaves()
    Pp_Project.main(Stu...)
```

Threads are all **RUNNING**.
- Breakpoints:** Two breakpoints are set: one at line 275 and another at line 295.
- Output:** The terminal shows:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit

4

How many leaves you want : 5
```
- Bottom Status:** Line 281, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:49 PM | 11/16/2023

The screenshot shows a Java debugger interface with the following details:

- Project:** Pp\_Project
- File:** Pp\_Project.java
- Breakpoint:** A red dot marks line 67: `case 4 :`
- Variables:** Local variables include `args: String[0]@36`, `sc: Scanner@37`, `e_id: "JJ1542023E..."`, `mainFlag: 1`, and `a: "Manage.txt"`.
- Watch:** No items are listed.
- Call Stack:** Shows the current stack trace:

```
PAUSED ON STEP
    Pp_Project.main(Stu...)
```

Threads are all **RUNNING**.
- Breakpoints:** Two breakpoints are set: one at line 275 and another at line 295.
- Output:** The terminal shows:

```
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit

4

How many leaves you want : 5
Leaves granted
```
- Bottom Status:** Line 67, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:49 PM | 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Toolbar:** Standard icons for file operations.
- Left Sidebar:**
  - VARIABLES:** Local variables: args: String[0@36], sc: Scanner@37, e\_id: "JJ1542023E..", mainFlag: 1, a: "Manage.txt".
  - WATCH:** No items listed.
  - CALL STACK:** Thread [Pp\_Project.main] is PAUSED ON STEP.
  - BREAKPOINTS:** Two breakpoints are set: one at line 275 and another at line 295, both marked with a red dot and checked.
- Code Editor:** The code for `Pp_Project.java` is displayed. A yellow box highlights line 38: 

```
boolean flag = true; flag = true
```
- Terminal:** The terminal output shows:

```
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```
- Bottom Status:** Line 38, Col 1, Spaces: 4, UTF-8, CRLF, Java. Date and time: 11/16/2023 7:49 PM.

The screenshot shows the Java IDE interface after the program has been executed. The terminal output is as follows:

```
How many leaves you want : 5
Leaves granted

Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```

The code editor shows the continuation of the `main` method. A yellow box highlights line 50: `int work = sc.nextInt();`

Bottom status: Line 50, Col 1, Spaces: 4, UTF-8, CRLF, Java. Date and time: 11/16/2023 7:49 PM.

The screenshot shows a Java application running in a debugger. The code in the editor is:

```
int work = sc.nextInt(); work = 3, sc = Scanner@37
switch (work) { work = 3
    case 1 :
        System.out.println();
        stu.showDetails();
        break;
    case 2 :
        System.out.println();
        stu.markAttendance();
        break;
    case 3 :
        System.out.println();
        stu.showAttendance();
        break;
}
```

The debugger is paused at line 51. The terminal window displays a menu of actions:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```

The status bar at the bottom indicates: Ln 51, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:49 PM | 11/16/2023.

This screenshot is identical to the one above, showing the same Java code, debugger state, terminal menu, and system status.

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 X. The code is as follows:

```
int work = sc.nextInt(); work = 3, sc = Scanner@37
switch (work) { if work == 3
    case 1 :
        System.out.println();
        stu.showDetails(); stu = Student@18
        break;
    case 2 :
        System.out.println();
        stu.markAttendance(); stu = Student@10
        break;
    case 3 :
        System.out.println();
        stu.showAttendance(); stu = Student@10
        break;
```

- Sidebar:** VARIABLES, Local (args: String[0]@36, sc: Scanner@37, e\_id: "JJ1542023E.., mainFlag: 1, a: "Manage.txt"), WATCH, CALL STACK (Paused on STEP), BREAKPOINTS (Pp\_Project.java: 275, Pp\_Project.java: 295).
- Terminal:** Please specify the action you want to perform  
1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit
- Status Bar:** Ln 62, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:49 PM | 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** J Pp\_Project.java 3 X. The code is as follows:

```
a++;
presentAttendance = Integer.toString(a);
System.out.println(x:"Attendance marked\n");
}

public void showAttendance() {
    int a = Integer.parseInt(presentAttendance); presentAttendance = "12"
    int l = Integer.parseInt(presentleaves);
    System.out.println("Your present attendance is "+a+" out of +(a+l)+" days\n");
}

public void showResult() {
    System.out.println("Your result for the previous year is : "+result);
```

- Sidebar:** VARIABLES, Local (> this: Student@18), WATCH, CALL STACK (Paused on FUNCTION), BREAKPOINTS (Pp\_Project.java: 275, Pp\_Project.java: 295).
- Terminal:** Please specify the action you want to perform  
1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit
- Status Bar:** Ln 296, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java | 7:59 PM | 11/16/2023

The screenshot shows a Java IDE interface with the following details:

- Title Bar:** File Edit Selection View Go Run ... Project
- Toolbar:** Standard icons for file operations.
- Left Sidebar:**
  - VARIABLES: Local variable 'a' is set to 12.
  - WATCH: No items listed.
  - CALL STACK: Thread 1 is PAUSED ON STEP at Student.showAttendance(). Other threads are RUNNING.
  - BREAKPOINTS: Breakpoints are set at line 275 and line 295, both of which are checked.
- Code Editor:** The code for Pp\_Project.java is displayed:

```
290     a++;
291     presentAttendance = Integer.toString(a);
292     System.out.println("Attendance marked\n");
293 }
294
295 public void showAttendance() {
296     int a = Integer.parseInt(presentAttendance); a = 12, presentAttendance = "12"
297     int l = Integer.parseInt(presentleaves); presentleaves = "5"
298     System.out.println("Your present attendance is "+a+" out of "+(a+l)+" days\n");
299 }
300
301 public void showResult() {
302     System.out.println("Your result for the previous year is : "+result);
```
- Terminal:** A prompt for action selection is shown:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit
```
- Bottom Status:** Line 297, Col 1, Spaces: 4, UTF-8, CRLF, Java. Date and time: 11/16/2023 7:50 PM.

This screenshot is nearly identical to the first one, but with different variable values:

- VARIABLES:** Local variable 'a' is now 12 and 'l' is 5.
- Code Editor:** The code for Pp\_Project.java is identical to the first screenshot.
- Terminal:** The action selection prompt is identical.
- Bottom Status:** Line 298, Col 1, Spaces: 4, UTF-8, CRLF, Java. Date and time: 11/16/2023 7:59 PM.

The screenshot shows a Java IDE interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, ...
- Project Bar:** Project
- Toolbars:** No Config, Variables, Watch, Call Stack, Breakpoints.
- Code Editor:** The code for `Pp_Project.java` is displayed. A red dot indicates a breakpoint at line 299. The code includes methods for marking attendance, showing attendance, and showing results.
- Breakpoint Context:** A modal dialog box is open, asking "Please specify the action you want to perform" with the following options:
  - 1 : View your information
  - 2 : Mark Today's Attendance
  - 3 : View present month's attendance
  - 4 : Apply for leaves
  - 5 : View result of previous year
  - 6 : View present year subjects
  - 7 : Update your information
  - 8 : Change password
  - 0 : Exit
- Call Stack:** Shows the current thread is paused at `Student.showAttendance`.
- Breakpoints:** Several breakpoints are set in the code, with two specifically highlighted for the current project.
- Bottom Status Bar:** Ln 299, Col 1 | Spaces: 4 | UTF-8 | CRLF | Java
- System Tray:** Shows battery level, signal strength, and date/time (11/16/2023).

The screenshot shows a Java development environment with the following interface elements:

- File Edit Selection View Go Run ...**: The top navigation bar.
- Project**: A search bar at the top right.
- Toolbars and Icons**: Standard icons for file operations, search, and project management.
- Code Editor**: Displays the file `Pp_Project.java` with the following code:

```
J Pp_Project.java 3 x
J Pp_Project.java > Pp_Project > main(String[])
57     System.out.println();
58     stu.markAttendance(); stu = Student@10
59     break;
60 case 3 :
61     System.out.println();
62     stu.showAttendance(); stu = Student@10
63     break;
64 case 4 :
65     System.out.println();
66     stu.getLeaves();
67     break;
68 case 5 :
69     System.out.println();
```
- VARIABLES**: A sidebar showing local variables: `args: String[0]@36`, `sc: Scanner@37`, `e_id: "JJ1542023E..."`, `mainFlag: 1`, and `a: "Manage.txt"`.
- WATCH**: A sidebar showing a single entry: `stu: Student@10`.
- CALL STACK**: Shows the current thread is `PAUSED ON STEP`. The stack trace includes:
  - `Pp_Project.main(Student@10)`
  - `Thread [R... RUNNING`
  - `Thread [F... RUNNING`
  - `Thread [S... RUNNING`
  - `Thread [A... RUNNING`
  - `Thread [N... RUNNING`
- BREAKPOINTS**: A sidebar showing two breakpoints:
  - Uncought Except...
  - Caught Exceptions
  - Pp\_Project... 275
  - Pp\_Project... 295
- TERMINAL**: A terminal window showing the following interaction:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
0 : Exit

3

Your present attendance is 12 out of 17 days
```
- Bottom Status Bar**: Includes icons for file operations, a progress bar, and status text: `Ln 63, Col 1 Spaces: 4 UFT-8 CRLF {} Java`.

The screenshot shows a Java IDE interface with a paused debug session. The code editor displays a file named `Pp_Project.java` with the following content:

```
32
33
34
35
36
37
38
39
40
41
42
43
44

Student stu = new Student(e_id, e_pass, line=br.readLine(), line=br.readLine(), line=br.readLine(),
line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine(),
line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine()); line = "87

boolean flag = true; flag = true
while(flag == true) { flag = true
System.out.println(x:"\nPlease specify the action you want to perform");
System.out.println(x:"1 : View your information");
System.out.println(x:"2 : Mark Today's Attendance");
System.out.println(x:"3 : View present month's attendance");
System.out.println(x:"4 : Apply for leaves");
System.out.println(x:"5 : View result of previous year");
System.out.println(x:"6 : View present year subjects");
System.out.println(x:"7 : Update your information");
System.out.println(x:"8 : Change password");
System.out.println(x:"9 : Exit");

3
Your present attendance is 12 out of 17 days
```

The terminal window shows the following output:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
9 : Exit
```

The call stack shows the current state of threads:

- Paused on step: `Pp_Project.main(String[] args)`
- Thread [R...]: RUNNING
- Thread [F...]: RUNNING
- Thread [S...]: RUNNING
- Thread [A...]: RUNNING
- Thread [N...]: RUNNING

Breakpoints are set at lines 275 and 295.

The screenshot shows a Java IDE interface with a running debug session. The code editor displays the same `Pp_Project.java` file as the first screenshot, but the code has been modified:

```
39
40
41
42
43
44
45
46
47
48
49
50
51

System.out.println(x:"\nPlease specify the action you want to perform");
System.out.println(x:"1 : View your information");
System.out.println(x:"2 : Mark Today's Attendance");
System.out.println(x:"3 : View present month's attendance");
System.out.println(x:"4 : Apply for leaves");
System.out.println(x:"5 : View result of previous year");
System.out.println(x:"6 : View present year subjects");
System.out.println(x:"7 : Update your information");
System.out.println(x:"8 : Change password");
System.out.println(x:"9 : Exit\n");

int work = sc.nextInt();
switch (work) {

Your present attendance is 12 out of 17 days
```

The terminal window shows the following output:

```
Please specify the action you want to perform
1 : View your information
2 : Mark Today's Attendance
3 : View present month's attendance
4 : Apply for leaves
5 : View result of previous year
6 : View present year subjects
7 : Update your information
8 : Change password
9 : Exit
```

The call stack shows the current state of threads:

- Running: `Thread [...]`
- Running: `Thread [R...]`
- Running: `Thread [F...]`
- Running: `Thread [S...]`
- Running: `Thread [A...]`
- Running: `Thread [N...]`
- Running: `Thread [C...]`

Breakpoints are set at lines 275 and 295.

The screenshot shows a Java IDE interface with a dark theme. The main window displays a Java file named `Pp_Project.java`. The code is a menu-driven application with options like viewing information, marking attendance, applying for leaves, viewing previous year results, viewing present year subjects, updating information, changing password, and exiting. A breakpoint is set at line 275, which is currently highlighted in yellow. The terminal pane shows the output of the application's execution so far.

```
System.out.println("Please specify the action you want to perform");
System.out.println("1 : View your information");
System.out.println("2 : Mark Today's Attendance");
System.out.println("3 : View present month's attendance");
System.out.println("4 : Apply for leaves");
System.out.println("5 : View result of previous year");
System.out.println("6 : View present year subjects");
System.out.println("7 : Update your information");
System.out.println("8 : Change password");
System.out.println("0 : Exit\n");

int work = sc.nextInt(); work = 0, sc = Scanner@37
switch (work) { work = 0
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Your present attendance is 12 out of 17 days

Please specify the action you want to perform

1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit

PAUSED ON STEP

Thread [R... RUNNING Thread [F... RUNNING Thread [S... RUNNING Thread [A... RUNNING Thread [N... RUNNING

BREAKPOINTS

- Uncaught Except...
- Caught Exceptions
- Pp\_Project... 275
- Pp\_Project... 295

Ln 51, Col 1 Spaces: 4 UTF-8 CRLF {} Java

7:50 PM 11/16/2023

This screenshot shows the same Java IDE interface as the first one, but the code is now at line 85. The code segment shown is part of a switch statement handling user input for password change. The terminal pane shows the application's output up to that point.

```
case 8 :
    System.out.println();
    stu.changePassword(); stu = Student@10
    break;
case 0 :
    System.out.println();
    flag = false;
    break;
default:
    System.out.println("Please choose a valid option\n");
    break;
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Your present attendance is 12 out of 17 days

Please specify the action you want to perform

1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit

PAUSED ON STEP

Thread [R... RUNNING Thread [F... RUNNING Thread [S... RUNNING Thread [A... RUNNING Thread [N... RUNNING

BREAKPOINTS

- Uncaught Except...
- Caught Exceptions
- Pp\_Project... 275
- Pp\_Project... 295

Ln 85, Col 1 Spaces: 4 UTF-8 CRLF {} Java

7:59 PM 11/16/2023

```
J Pp_Project.java 3 x
J Pp_Project.java > Pp_Project > main(String[])
79
80
81
82
83
84
85
86
87
88
89
90
91

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Ln 86, Col 1 Spaces: 4 UTF-8 CRLF {} Java
7:50 PM 11/16/2023
```

Please specify the action you want to perform  
1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit  
0

```
J Pp_Project.java 3 x
J Pp_Project.java > Pp_Project > main(String[])
79
80
81
82
83
84
85
86
87
88
89
90
91

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Ln 87, Col 1 Spaces: 4 UTF-8 CRLF {} Java
7:51 PM 11/16/2023
```

Please specify the action you want to perform  
1 : View your information  
2 : Mark Today's Attendance  
3 : View present month's attendance  
4 : Apply for leaves  
5 : View result of previous year  
6 : View present year subjects  
7 : Update your information  
8 : Change password  
0 : Exit  
0

The screenshot shows a Java IDE interface with the following details:

- Project Bar:** File, Edit, Selection, View, Go, Run, ...
- Editor:** The file `Pp_Project.java` is open, showing code related to a student management system. Line 38 is highlighted.
- Variables View:** Shows local variables: `args: String[0]@36`, `sc: Scanner@37`, `e_id: "JJ1542023E..."`, `mainFlag: 1`, and `a: "Manage.txt"`.
- Watch View:** No items are listed.
- Call Stack:** The stack trace shows the current thread is paused at `Pp_Project.main(String[] args)`. Other threads are listed as running.
- Breakpoints:** Breakpoints are set at lines 275 and 295 of `Pp_Project.java`.
- Terminal:** Displays the output of the program's execution so far.
- Status Bar:** Shows the line number (Ln 38, Col 1), spaces used (Spaces: 4), encoding (UTF-8), and file type (CRLF). It also shows the Java version (J 11) and the current date and time (11/16/2023, 7:51 PM).

```
Student stu = new Student(e_id, e_pass, line=br.readLine(), line=br.readLine(), line=br.readLine(),
line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine(),
line=br.readLine(), line=br.readLine(), line=br.readLine(), line=br.readLine()); line = "87"

boolean flag = true; flag = false
while(flag == true) { flag = false
System.out.println(x:"\nPlease specify the action you want to perform");
System.out.println(x:"1 : View your information");
System.out.println(x:"2 : Mark Today's Attendance");
System.out.println(x:"3 : View present month's attendance");
System.out.println(x:"4 : Apply for leaves");
System.out.println(x:"5 : View result of previous year");
System.out.println(x:"6 : View present year subjects");
System.out.println(x:"7 : Update your information");
System.out.println(x:"8 : Change password");
System.out.println(x:"0 : Exit");

0
```