

Lab 1

Task 1: Java Basics

Question 1:

The Manifest file contains the meta information about the files packaged in a JAR file. C would become the main class if there were three classes and C had the main method

Question 2:

The if statement is visited four times.

```
C:\WINDOWS\system32\cmd. X + v

2 Dir(s) 806,404,665,344 bytes free

C:\Soft1\HelloWorld\src> javac HelloWorld.java

C:\Soft1\HelloWorld\src> ls
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Soft1\HelloWorld\src> vim HelloWorld.java
'vim' is not recognized as an internal or external command,
operable program or batch file.

C:\Soft1\HelloWorld\src>ls
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Soft1\HelloWorld\src>dir
Volume in drive C is OS
Volume Serial Number is E06A-4A62

Directory of C:\Soft1\HelloWorld\src

08/26/2024 05:35 PM <DIR>      .
08/26/2024 05:32 PM <DIR>      ..
08/26/2024 05:35 PM             515 HelloWorld.class
08/26/2024 05:32 PM             453 HelloWorld.java
                2 File(s)          968 bytes
                2 Dir(s) 806,268,497,920 bytes free

C:\Soft1\HelloWorld\src>java HelloWorld
Hello, World
Jackpot!

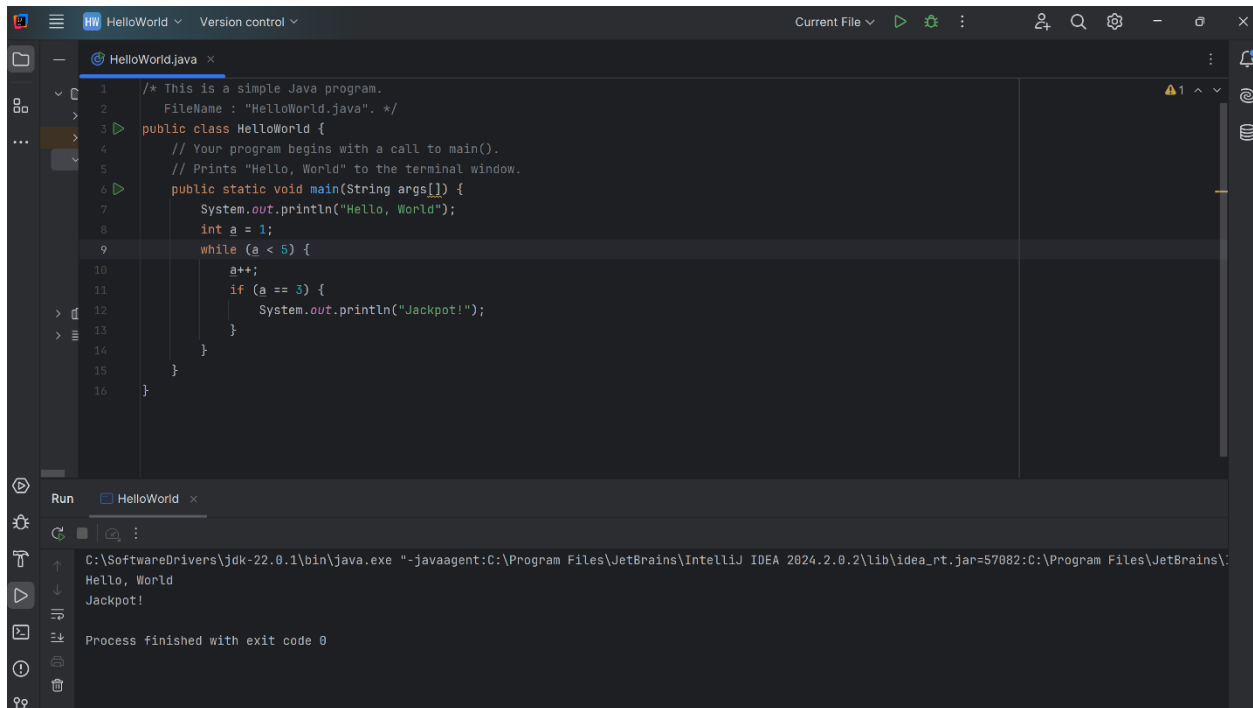
C:\Soft1\HelloWorld\src> jar cfm HelloWorld.jar Manifest.txt HelloWorld.class

C:\Soft1\HelloWorld\src>java -jar HelloWorld.jar
Hello, World
Jackpot!

C:\Soft1\HelloWorld\src>
```

Untitled Gantt Project

Aug 31, 2024



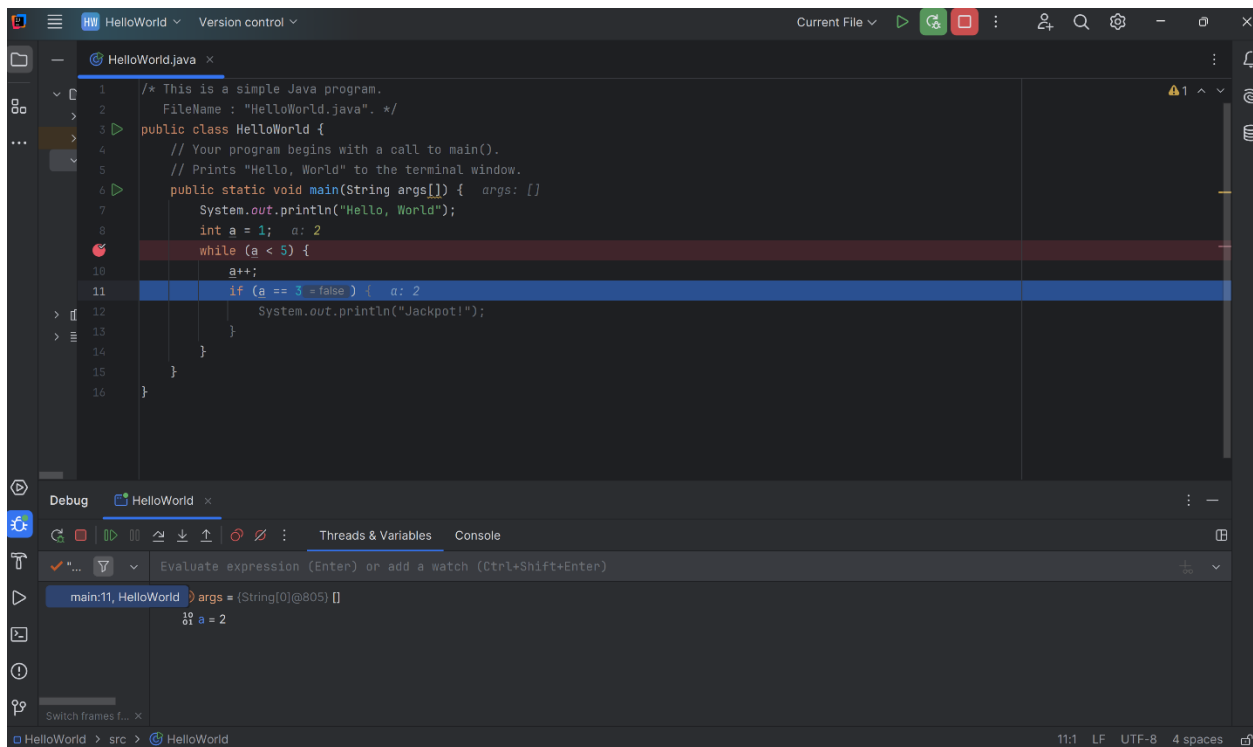
This screenshot shows the IntelliJ IDEA interface with a Java file named `HelloWorld.java` open. The code is a simple Java program that prints "Hello, World" and then enters a loop that increments a counter `a` until it reaches 5. Inside the loop, it prints "Hello, World" and "Jackpot!" when `a` is 3. The Run window at the bottom shows the output of the program: "Hello, World" and "Jackpot!".

```
1  /* This is a simple Java program.
2  FileName : "HelloWorld.java". */
3  public class HelloWorld {
4      // Your program begins with a call to main().
5      // Prints "Hello, World" to the terminal window.
6      public static void main(String args[]) {
7          System.out.println("Hello, World");
8          int a = 1;
9          while (a < 5) {
10             a++;
11             if (a == 3) {
12                 System.out.println("Jackpot!");
13             }
14         }
15     }
16 }
```

Run HelloWorld

```
C:\SoftwareDrivers\jdk-22.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2024.2.0.2\lib\idea_rt.jar=57082:C:\Program Files\JetBrains\
Hello, World
Jackpot!

Process finished with exit code 0
```



This screenshot shows the IntelliJ IDEA interface with the same Java file `HelloWorld.java` open. The code is the same as in the first screenshot. The Debug window at the bottom shows the state of the program during execution. The current frame is `main:11, HelloWorld`, and the variables `args` and `a` are shown. The value of `a` is 2.

```
1  /* This is a simple Java program.
2  FileName : "HelloWorld.java". */
3  public class HelloWorld {
4      // Your program begins with a call to main().
5      // Prints "Hello, World" to the terminal window.
6      public static void main(String args[]) { args: []
7          System.out.println("Hello, World");
8          int a = 1; a: 2
9          while (a < 5) {
10             a++;
11             if (a == 3 == false) { a: 2
12                 System.out.println("Jackpot!");
13             }
14         }
15     }
16 }
```

Debug HelloWorld

Threads & Variables Console

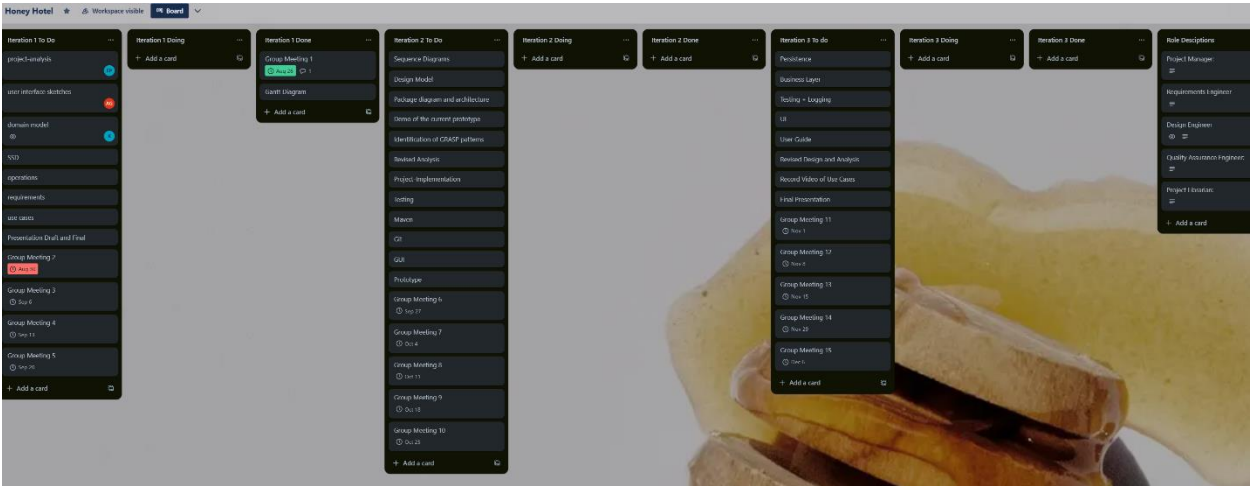
Evaluate expression (Enter) or add a watch (Ctrl+Shift+Enter)

main:11, HelloWorld args = (String[0]@805) []
a = 2

Switch frames f... x

HelloWorld > src > HelloWorld 11:1 LF UTF-8 4 spaces

Task 2: Scrum – Task Board



Task 3: Gantt Diagram

http://

Project manager	
Project dates	Aug 30, 2024 - Dec 7, 2024
Completion	0%
Tasks	87
Resources	5

Untitled Gantt Project Tasks

Name	Begin date	End date
Iteration 1	8/30/24	9/20/24
Analysis	8/30/24	9/5/24
project vision	8/30/24	9/5/24
team assembly	8/30/24	9/5/24
infrastructure initialization	8/30/24	9/5/24
requirements analysis	8/30/24	9/5/24
use cases	8/30/24	9/5/24
traceability matrix	8/30/24	9/5/24
system sequence diagrams	8/30/24	9/5/24
system operations	8/30/24	9/5/24
wireframes	8/30/24	9/5/24
domain model	8/30/24	9/5/24
presentation and reporting	8/30/24	9/5/24
Design	9/6/24	9/12/24
design model	9/6/24	9/12/24
sequence diagrams	9/6/24	9/12/24
package diagrams	9/6/24	9/12/24
GRAPS patterns	9/6/24	9/12/24
test coverage	9/6/24	9/12/24
prototyping	9/6/24	9/12/24
presentation and reporting	9/6/24	9/12/24
Implementation	9/13/24	9/20/24
backend	9/13/24	9/20/24
user interface	9/13/24	9/20/24
user input validation	9/13/24	9/20/24
imports/exports	9/13/24	9/20/24
unit-testing	9/13/24	9/20/24
documentation	9/13/24	9/20/24
presentation and reporting	9/13/24	9/20/24
Iteration 2	9/23/24	10/25/24
Analysis	9/23/24	10/2/24
project vision	9/23/24	10/2/24

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team assembly	9/23/24	10/2/24
infrastructure initialization	9/23/24	10/2/24
requirements analysis	9/23/24	10/2/24
use cases	9/23/24	10/2/24
traceability matrix	9/23/24	10/2/24
system sequence diagrams	9/23/24	10/2/24
system operations	9/23/24	10/2/24
wireframes	9/23/24	10/2/24
domain model	9/23/24	10/2/24
presentation and reporting	9/23/24	10/2/24

Tasks

Name	Begin date	End date
Design	10/3/24	10/14/24
design model	10/3/24	10/14/24
sequence diagrams	10/3/24	10/14/24
package diagrams	10/3/24	10/14/24
GRAPS patterns	10/3/24	10/14/24
test coverage	10/3/24	10/14/24
prototyping	10/3/24	10/14/24
presentation and reporting	10/3/24	10/14/24
Implementation	10/15/24	10/25/24
backend	10/15/24	10/25/24
user interface	10/15/24	10/25/24
user input validation	10/15/24	10/25/24
imports/exports	10/15/24	10/25/24
unit-testing	10/15/24	10/25/24
documentation	10/15/24	10/25/24
presentation and reporting	10/15/24	10/25/24
Iteration 3	10/28/24	12/6/24
Analysis	10/28/24	11/8/24
project vision	10/28/24	11/8/24
team assembly	10/28/24	11/8/24
infrastructure initialization	10/28/24	11/8/24
requirements analysis	10/28/24	11/8/24
use cases	10/28/24	11/8/24

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traceability matrix	10/28/24	11/8/24
system sequence diagrams	10/28/24	11/8/24
system operations	10/28/24	11/8/24
wireframes	10/28/24	11/8/24
domain model	10/28/24	11/8/24
presentation and reporting	10/28/24	11/8/24
Design	11/11/24	11/22/24
design model	11/11/24	11/22/24
sequence diagrams	11/11/24	11/22/24
package diagrams	11/11/24	11/22/24
GRAPS patterns	11/11/24	11/22/24
test coverage	11/11/24	11/22/24
prototyping	11/11/24	11/22/24
presentation and reporting	11/11/24	11/22/24
Implementation	11/25/24	12/6/24
backend	11/25/24	12/6/24
user interface	11/25/24	12/6/24
user input validation	11/25/24	12/6/24
imports/exports	11/25/24	12/6/24

Untitled Gantt Project

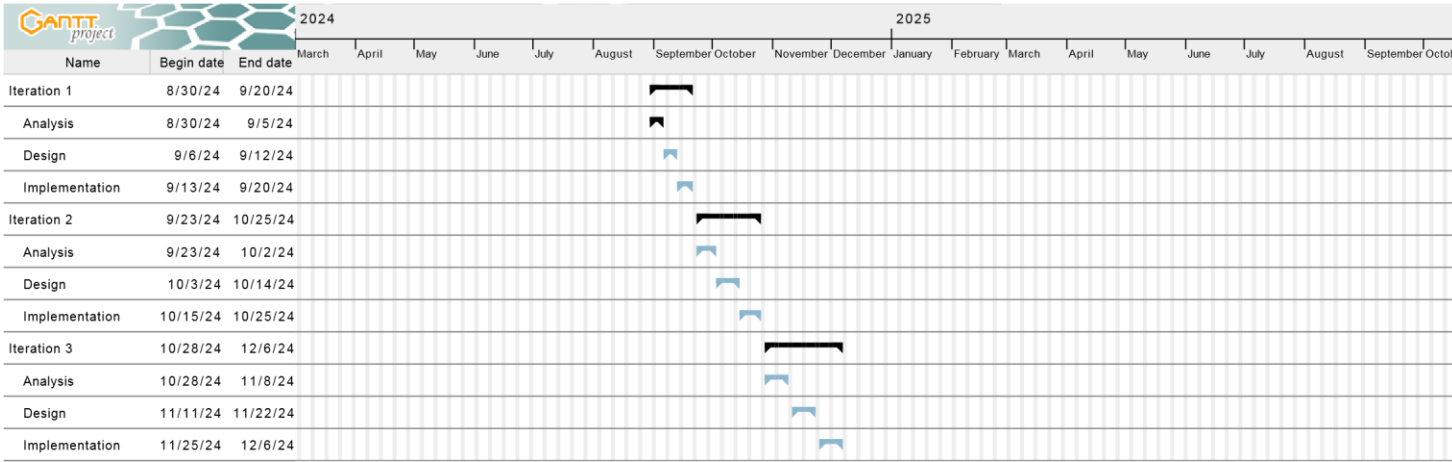
Tasks

Name	Begin date	End date
unit-testing	11/25/24	12/6/24
documentation	11/25/24	12/6/24
presentation and reporting	11/25/24	12/6/24

Resources

Name	Default role
Samuel Choi	Team Lead
Kirby Dyson	Analyst
Candor Miller	Tester
Eugene Pak	Developer
Aiden Grajo	Developer

Gantt Chart



Resources Chart

