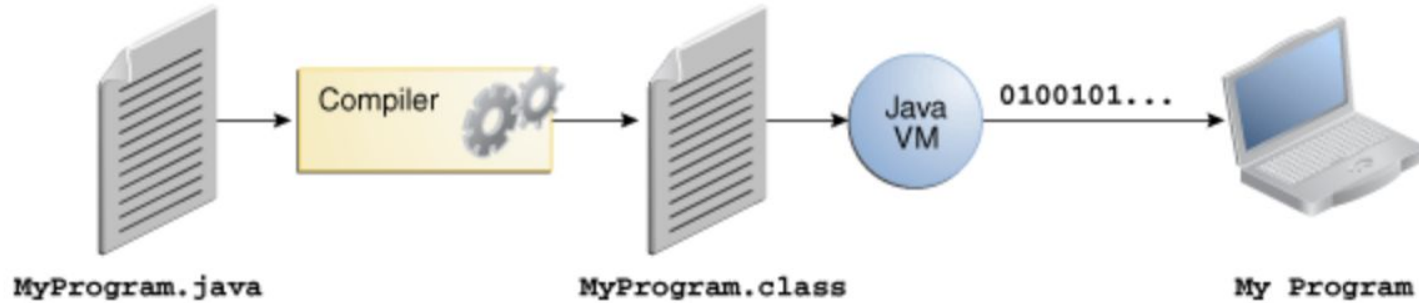


# CMPT 225

Lab - Week 02

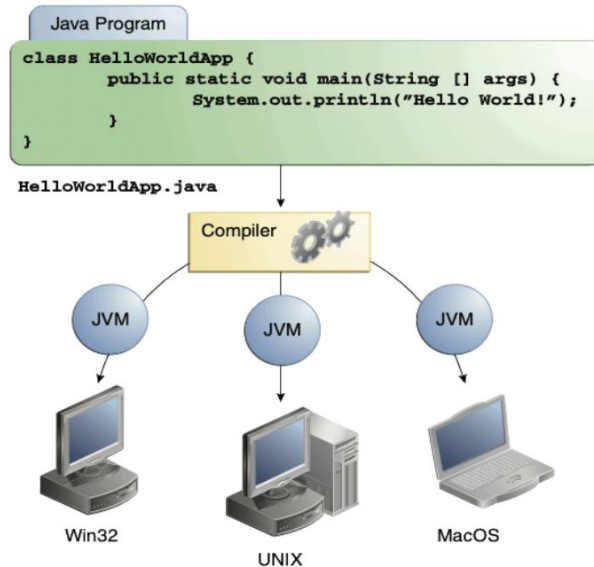
# A Short Introduction

SFU



Source: <https://docs.oracle.com/>

# Platform Independence



Through the Java VM, the same application is capable of running on multiple platforms.

Source: <https://docs.oracle.com/>

# Setup Java Development Environment

Install JDK to compile your code

Install Java Runtime Environment to run your program

Check with below commands

```
javac -version
```

```
java -version
```

# First Program Using Terminal

We save below code in HelloWorld.java, and compile it with ***javac HelloWorld.java***

```
public class HelloWorld {  
    public static void main(String[] args){  
        System.out.println("Hello World");  
    }  
}
```

It generated a file HelloWorld.class ,we then run the class file using (Note that there is no .class in below command)

***java HelloWorld***

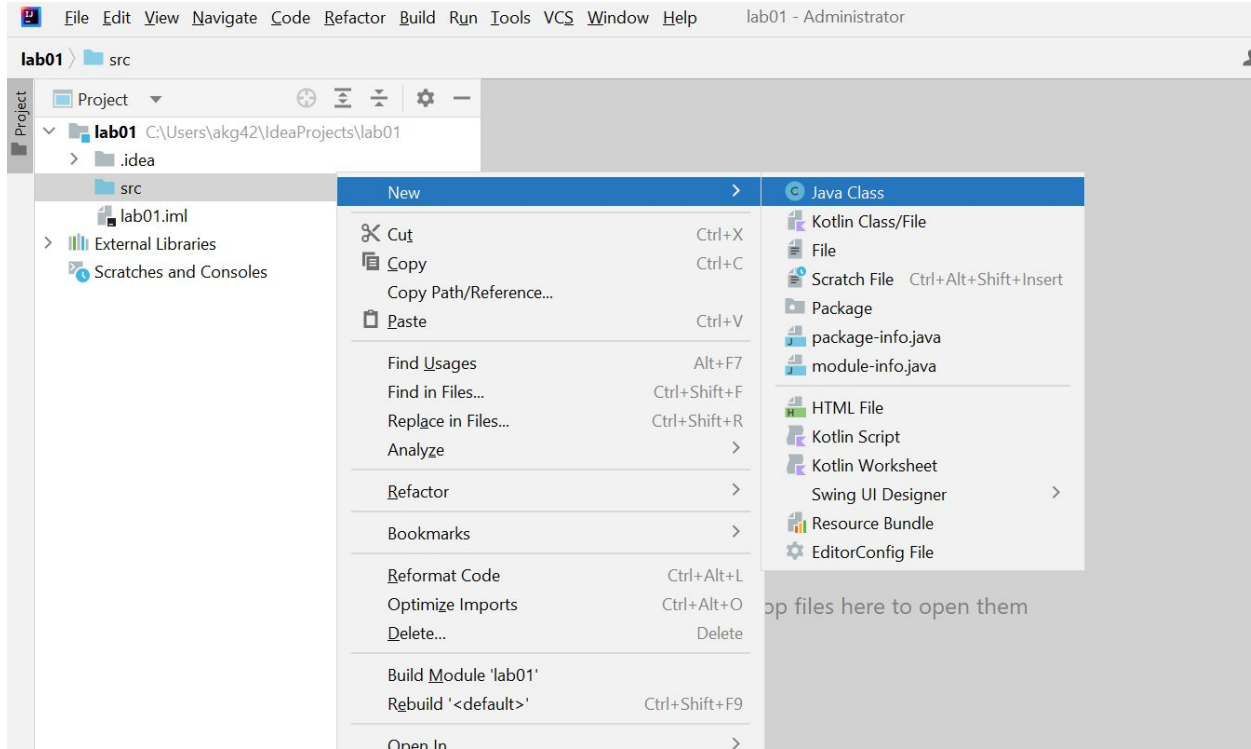
# Setup IntelliJ

Install IntelliJ (or eclipse on any other IDE of your choice)

Create a new java project

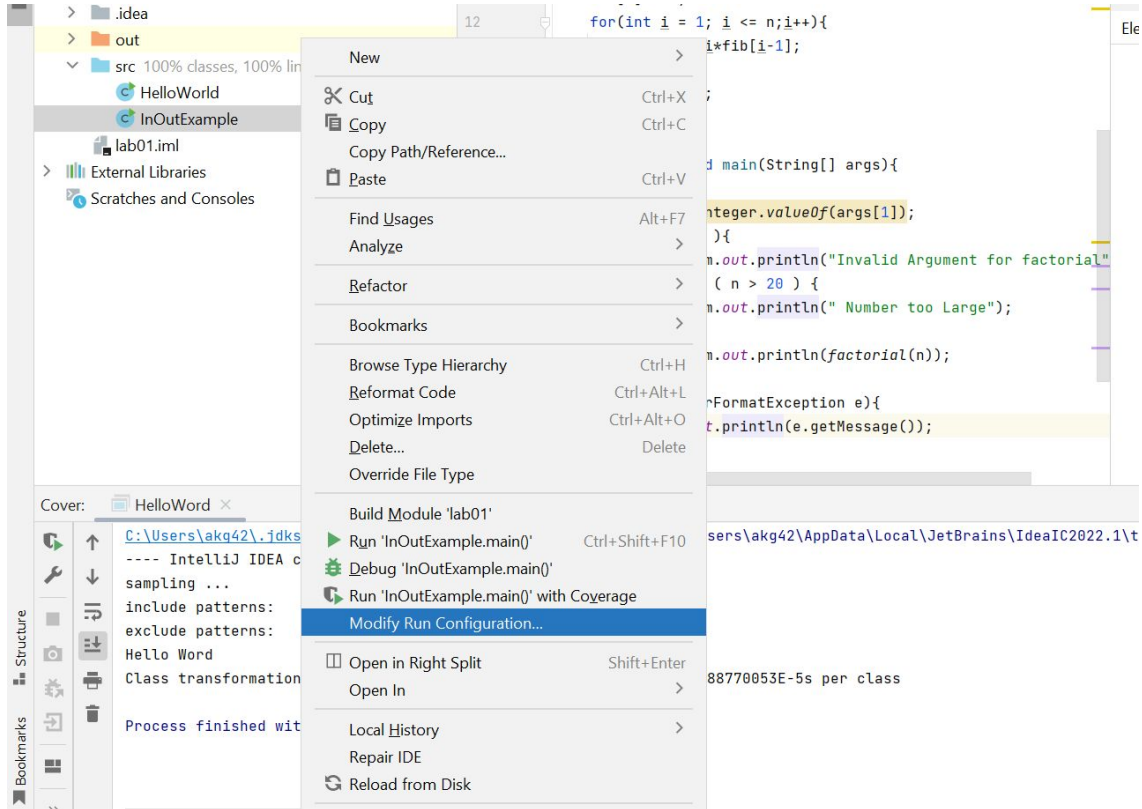
file->new->project

# Add a new class



# Pass Runtime Arguments

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Create Run Configuration: 'InOutExample'

Name:  ☐ Store as project file

---

**Build and run** [Modify options](#) Alt+M

java 11 SDK of 'lab01'

CLI arguments to your application. Alt+R

Working directory:

Environment variables:

Separate variables with semicolon: VAR=value; VAR1=value1

☐ Open run/debug tool window when started

	Class, %	Method, %	
Word	100% (1/...	100% (1/1)	1

intellij-coverage-agent-1.0.656.jar=C:\U:

# Debugging

Setup break points and select Debug after right click.

# Primitive Data Types in Java

Total 8 primitive types

**byte , short, int, long**

**char, boolean**

**double, float**

\*Primitive values do not share state with other primitive values

## Run and Debug in IntelliJ

```
9 private static long factorial(int n){
10     if( n == 0 )return 1L;
11     return n * factorial( n-1);
12 }
13
14 public static void main(String[] args){
15     try{
16         int n = Integer.valueOf(args[0]);
17         if (n < 0 ){
18             System.out.println("Invalid Argument for factorial");
19         } else if ( n > 20 ) {
20             System.out.println(" Number too Large");
21         } else {
22             System.out.println(factorial(n));
23         }
24     } catch (NumberFormatException e){
25         System.out.println(e.getMessage());
26     }
27 }
28
29 }
```

# SSH to CSIL

The logo of Simon Fraser University (SFU) is located in the top right corner. It consists of the letters "SFU" in a white, bold, sans-serif font, centered within a solid red rectangular background.

## Guides

<https://www.sfu.ca/fas/computing/support/csil/remote-access.html>

Open a terminal and use -

```
ssh -p 24 ssh -p 24 <sfu username>@<name of a CSIL Linux CPU server>
```

After logging in, you can check if it has java.

Then you can also copy your files to CSIL machine using scp

```
scp src/Hello.java -p 24 ssh -p 24 <sfu username>@<name of a CSIL Linux CPU server>:/home/<sfu username>
```