

Java Language

Introduction

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Intro

What is program and programming

What is Java Language

Why Java

From source code to a running program

- Source code

- Compiler

- executing

Errors

- Syntax error

- Runtime error

- Symantics/logic error

Using terminal and Linux

- Why?

- How?

Intro continued

Source file of a class

How to create

Basic Linux

Linux Intro

Basic Commands

- Change directory
 - Cd directory_name
- Remove file
 - Rm fileName
- Get a list of the content in the directory
 - Ls
- Clean the page
 - ~clear
- Vim fileName

Vim

- Opening vim
- Create a new file
- Writing in a file
- Writing a command
- Saving the file
- Exiting the file
- Saving and exiting at the same time

- Wq: w=> write on the memory (save), q stands for quit
- X: save and quit at the same time
-

Source file

What is a source file

How to create a file for a class

Naming convention

To create a class we use the keyword `class`

A class is made up of two parts:

- The header

This is where we define the class

- The body of a class is enclosed between two braces

This is where we add the content of the class

General syntax of a class

```
Access_modifier class ClassName{  
    body  
}
```

Indentations and white spaces

What is a main method and why it is so special

It is the entry point to a program and it is where the program starts running. If we do not have any main method we will get a compilation error

General syntax for main method

**What is a hello world program
and why is it important**

Hello world class

```
Public class HelloWorld{  
    // this is the main method where all the actions takes place  
    Public static void main(String[] args){  
        // displays a greeting  
        System.out.println("Hello World");  
    }  
}
```

Compiling a class

Parse the code

Checks for any syntax error

Allocates memory

Objects and data types; hence we need to specify the datatype of each variables

Translated the source code into

```
userName~ Javac fileName.java
```

Executing a program
~ `java className`

How to use a method

System class

system.out

Executing a program

Reading input from the console

- Create a scanner object where "system.in" is the parameter of the constructor
- Use any next*(...) method to read the user input
- Save the input to use in the program