

Introduction to Module

Content, Structure and the JVM

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Topics list

1. Module Content and Structure.

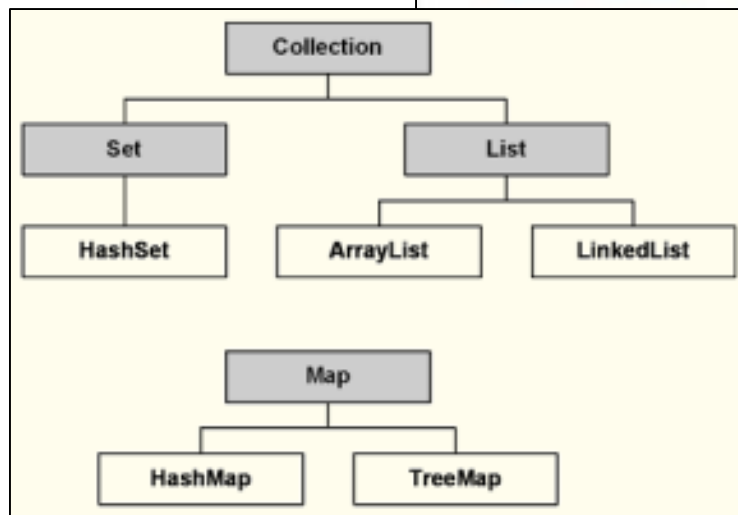
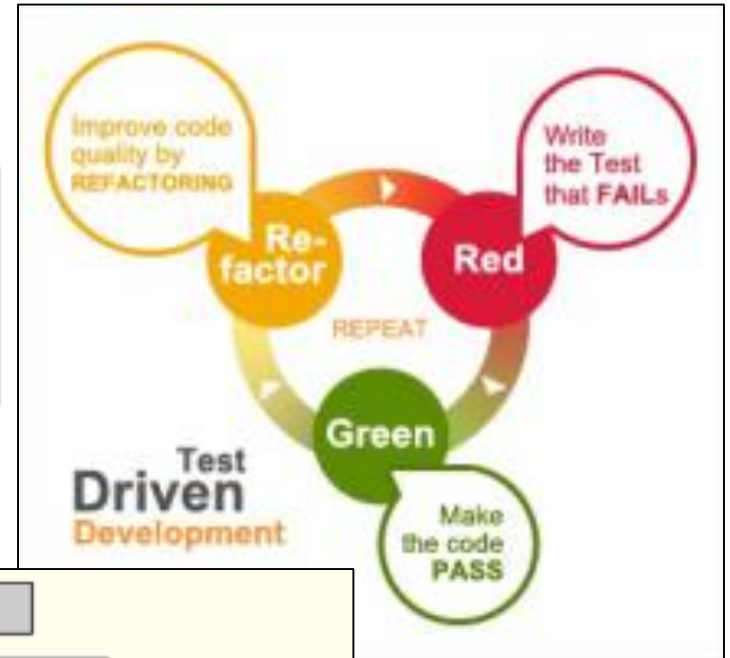
2. Java Language:

a) **Files** in Java.

b) Java Virtual Machine (**JVM**).

c) **main()** method.

Module Content



Module Content

- Focus on:
 - Menu Driven Systems (console based)
 - Data Structures
 - CRUD and Persistence (XML)
 - Exceptions
 - Inheritance, Polymorphism and Abstraction

- 100% CA:
 - Assignment 1
 - Assignment 2

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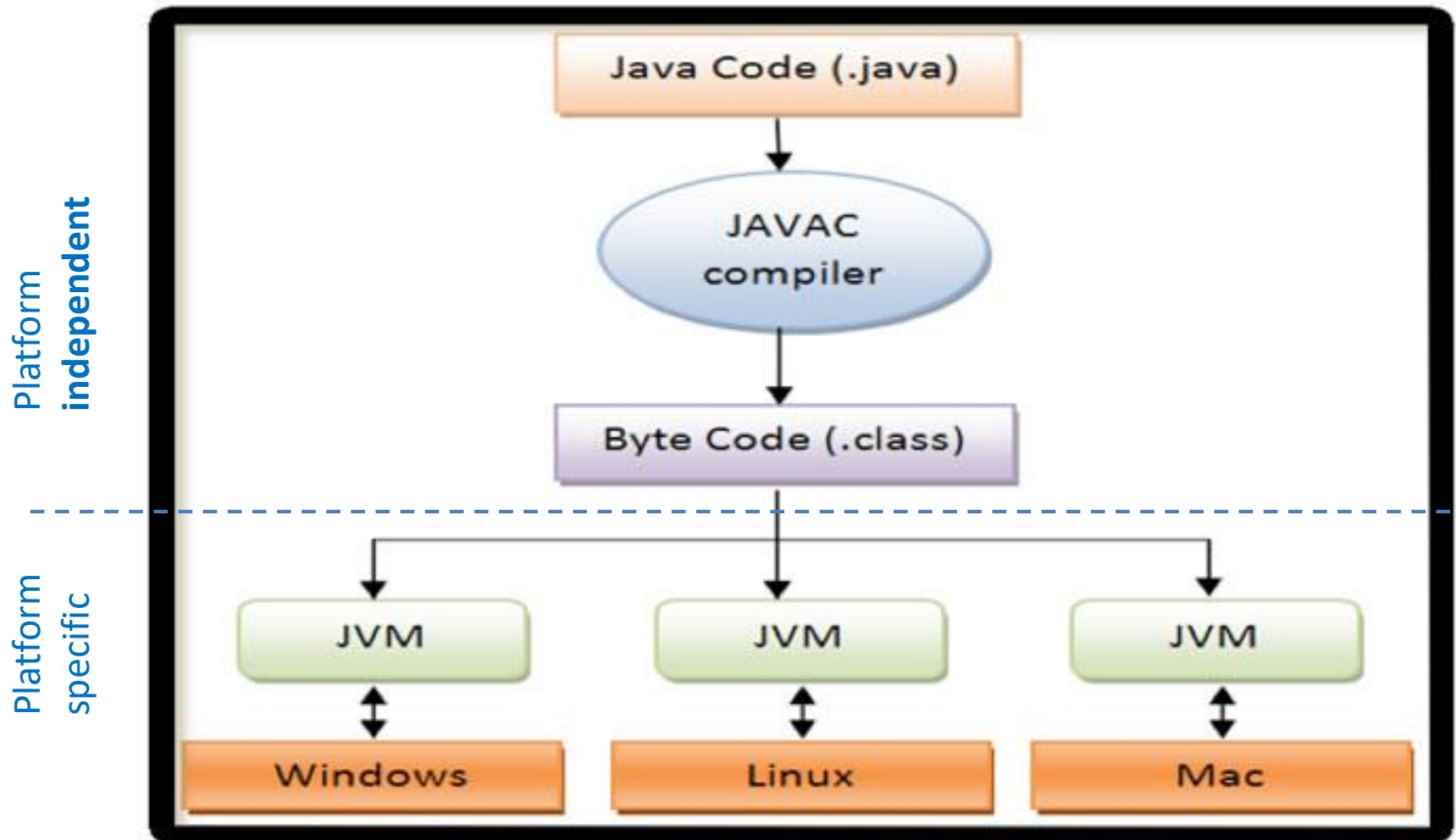
2. Java Language:

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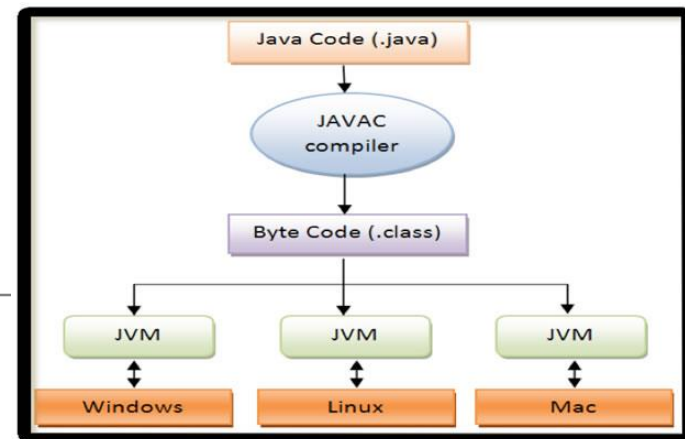
c) **main()** method.

Files in Java (1)



Files in Java (3)

- **Java code** is written in **.java** file.
 - code contains one or more Java language constructs e.g. Classes, Methods, Variable, Objects etc.
- **Compiling** this code generates a **.class** file
- A **.class** file
 - “**byte code**”
 - the input to Java Virtual Machine (JVM)
 - The **JVM** (*for a specific platform*)
 - **reads** this byte code
 - **interprets** it as machine code instructions (*for that platform*)
 - and **executes** the program (*on that platform*)

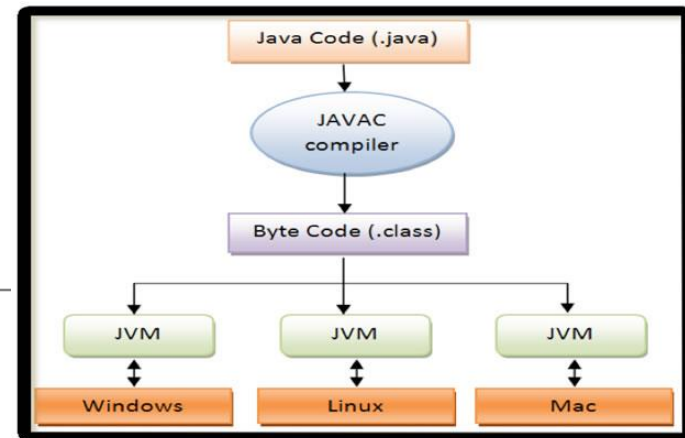


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Java Virtual Machine (JVM)

- A “**virtual**” computer that resides in the “real” computer as a software process.
- Gives Java the flexibility of **platform independence**.
- The **.class** files can be run on any OS, once a JVM has been installed
 - (NB: JVM is installed when you install the JDK).



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1. Module Content and Structure.
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main() method

- When you want to run a java project, the Java Virtual Machine (JVM) invokes the **main()** method in the project.
- For the JVM to recognise it, the main() method must have a specific method **signature**.

```
public static void main(String[] args)
{
    . . .
}
```

main() method - signature

- “main” must exist
- “main” must be **public**
- “main” must be **static** (class method)
- “main” must have a **String** array parameter
- Only “main” can be invoked automatically.

```
public static void main(String[] args)
{
    . . .
}
```

The **main()** method typically...

```
public static void main(String[] args)
{
    Driver driver= new Driver();
    driver.runMenu();
}
```

Creates an object

Calls the first
method

Questions?

