Chapter 2: Java Fundamentals

Java Program
Structure

Content

- Java Program Structure

- Salam Program

- Saving, Compiling and Running Java Programs

- Comments

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Introduction to OOP

Java Program Structure

```java
// import Section - import used java libraries
public class MyProgramName {

 // main method
    public static void main( String args[] ){
        // Declaration section - Declare needed variables

        // Input section - Enter required data

        // Processing section - Processing Statements

        // Output section - Display expected results

    } // end main

} // end class
```

Salam Program

```java
// import section: Empty
public class MySalamProgram {

  // main method
    public static void main( String args[] ){
        // Declaration section: Empty

        // Input section: Empty

        // Processing section: Empty

        // Output section
        System.out.println("… Assalamo Alaikom …");

    } // end main

} // end class
```

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Introduction to OOP

Saving, Compiling and Running Java Programs

- Saving a Java program.
  - A file having a name same as the class name should be used to save the program. The extension of this file is ".java".
    - Salam program should be saved in a file called "*MySalamProgram.java*".

- Compiling a Java program.
  - Call the Java compiler javac:
    - javac *MySalamProgram.java*
    - The Java compiler generates a file called "*MySalamProgram.class*" (the bytecode).

- Running a Java program
  - Call the Java Virtual Machine java:
    - java *MySalamProgram.class*

Comments in a Java Program

- *Comments* are used to describe what your code does and aid reading your code.
- The Java compiler ignores them.
- Comments are made using
  - *//*, which comments to the end of the line,
  - or */* */*, everything inside of it is considered a comment (including multiple lines). The comment begins after the first */**. It ends just before the first **/*.

- Examples:

    /* This comment begins at this line.
    This line is included in this comment
    It ends at this line. */

    // This comment starts here and ends at the end of this line.