

Chapter one

The first step

Software

- A computer is not very useful unless we give it some instructions that tell it what to do. This set of instructions is called a **program**.
- The word Software is the name given to a single program or a set of programs. There are two main kinds of software:
 1. Application software: such as; word processors, games,...
 2. System software: such as; Linux, windows, ..

Compiling programs

- The set of instructions written in a programming language is called the program code or source code.
- The language of the computer is often referred to as machine code
- A special piece of system software called a compiler translates the instructions written in a programming language into machine instructions consisting of 0's and 1's. This process is known as compiling.

Programming in java

- The problem with the traditional compiling leads to that the final compiled program is suitable only for a particular type of computer.
- But Java is a **Platform Independent**.
- Any java program requires the computer it is running on to also be running a special program called a **Java Virtual Machine**, or **JVM**.
- This JVM is able to run a Java program for the particular computer on which it is running.
- There is JVM for a PC running Windows; there is JVM for MAC; JVM for mobiles and so on.

Java applications

1. Text based (console applications).
 2. Graphics based (GUI).
- Applet: is a program that is designed to be available over the internet and to run in a browser such as Internet Explorer.

Your first program

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

Output in java

- `System.out.print("hello world");`
- `System.out.println("Hello world");`
- `System.out.println("Hello" + "world");`