MOBILE PROGRAMMING LANGUAGES

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Mobile App Programming in C++

MOBILE APP PROGRAMMING IN C++

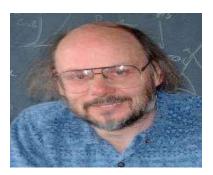
- C++
 - Is a Procedural as well as Object- oriented language
 - Has good control over native programming
- C++ is one of the popular languages used to develop mobile application.

MOBILE APP PROGRAMMING IN C++

- C++ based platforms are:
 - Symbian
 - Bada
 - Windows mobile

Introduction to C++

• History of C++:



- C++ is an object-oriented programming language.
- C++ was invented by Bjarne Stroustrup in 1979 at Bell

Laboratories.

 ✓ Initially Stroustrup called the new language as 'C with

Classes'.

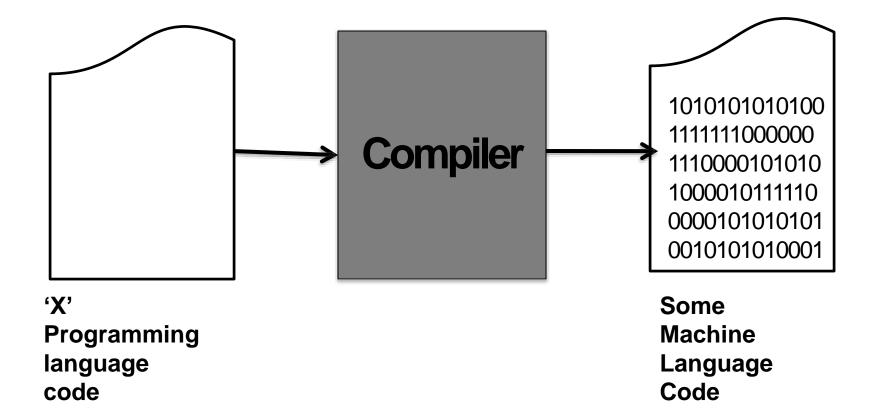
✓ Later, in 1983 the name was changed to C++.

INTRODUCTION TO C++

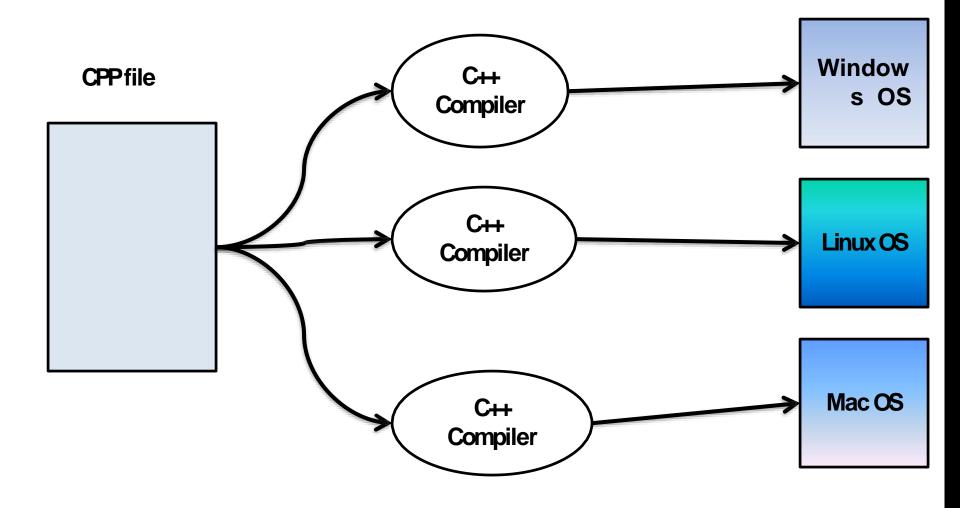
- Advantages of C++:
 - Relatively low-level language
 - Systems programming language
 - Good control over native programming
 - Extremely fast

WHAT IS COMPILER?

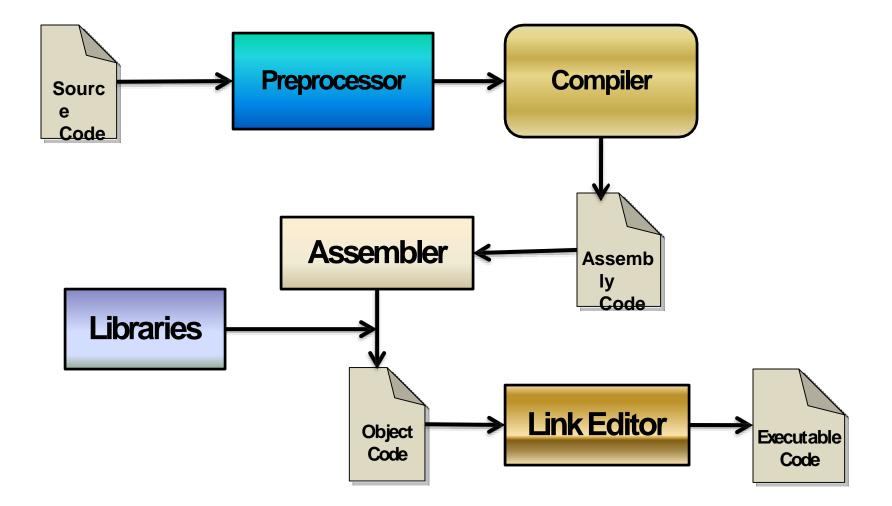
• A program that translates a programming language into machine code is called a compiler.



C++ COMPILER



Execution of C++ application



SYMBIAN

- Symbian is mobile Operating System.
- Proprietary OS developed by Symbian Ltd.
- Symbian used programming language C++

SYMBIAN C++

- Symbian C++ application development is commonly considered a difficult discipline.
- It is not used standard C++.
- To develop required certain installations on PC
 - Integrated Development Environment (IDE)
 - ✓ Eclipse based Carbide.c++
 - Software Development Kit(SDK)
 - Emulator

MICROSOFT EMBEDDED VC++

- The Microsoft embedded Visual C++ tool is:
 - Adesktop development environment
 - Creates application and system components for Windows CE
- This version features new capabilities such as C++ .
 - Exception handling
 - Run Time Type Information (RTTI)
 - New debugger functionalities

Mobile App Programming in C++

INTRODUCTION TO JAVA

- History of Java
 - Background: Electronic Consumer devices.
 - Sun commissioned 'Project Green'.
 - Developed language 'Oak-Later renamed to Java'.
 - Was dismissed as just another OO programming language.
 - Became popular with the rising popularity of 'www'.



Introduction to Java

- It is a platform introduced by Sun Microsystems
- It is used to:
 - ✓ Develop applications
 - ✓ Host applications
 - ✓ Deploy applications
 - Maintain applications
 - Execute applications

Advantages of Java

- Object Oriented
- Simple
- Robust
- Distributed
- Secure

- Architecture neutral
- Portable
- Interpreted
- Dynamic
- Multi threaded

MOBILE APP PROGRAMMING IN JAVA

- Java is
 - Object oriented
 - Platform Independent
 - Open sourceTechnology
- Java is a popular language to develop mobile application.

MOBILE APP PROGRAMMING IN JAVA

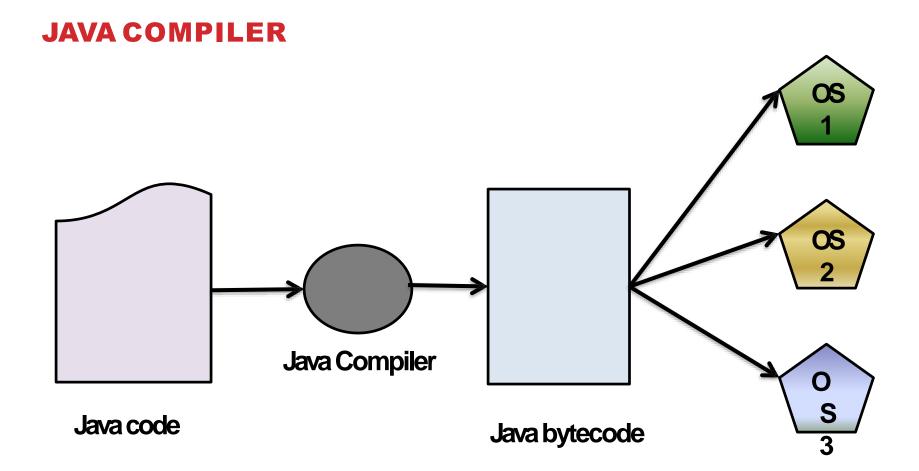
- Maximum hand-held devices based on Java only.
 - PDA
 - Cell Phone
 - Set top-boxes
 - Java Card





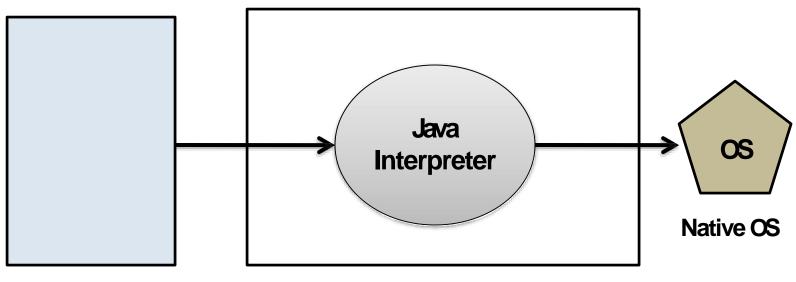






Java Interpreter

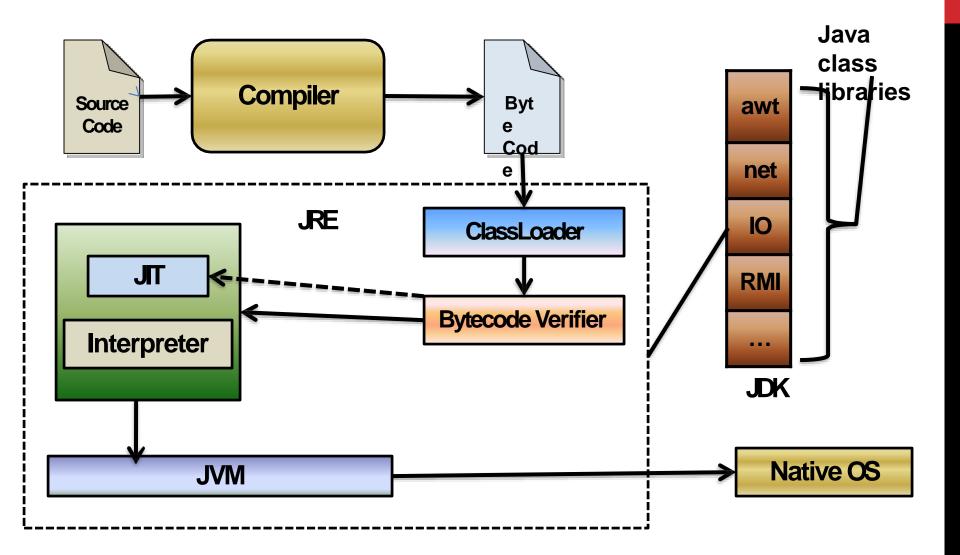
• Bytecode can execute on any operating system - java runtime environment.



ClassName.class

Java Runtime Environment

EXECUTION OF JAVA APPLICATION



DISADVANTAGES OF USING JAVA

- Java applications are comparatively slow
 - Running bytecode through interpreter
- Difficult to handle device specific features like Bluetooth
 - Java is device independent