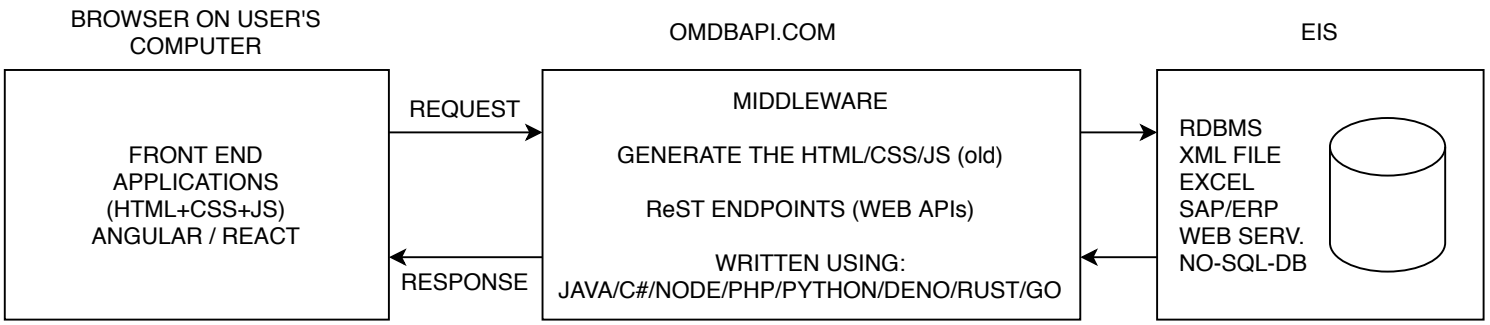
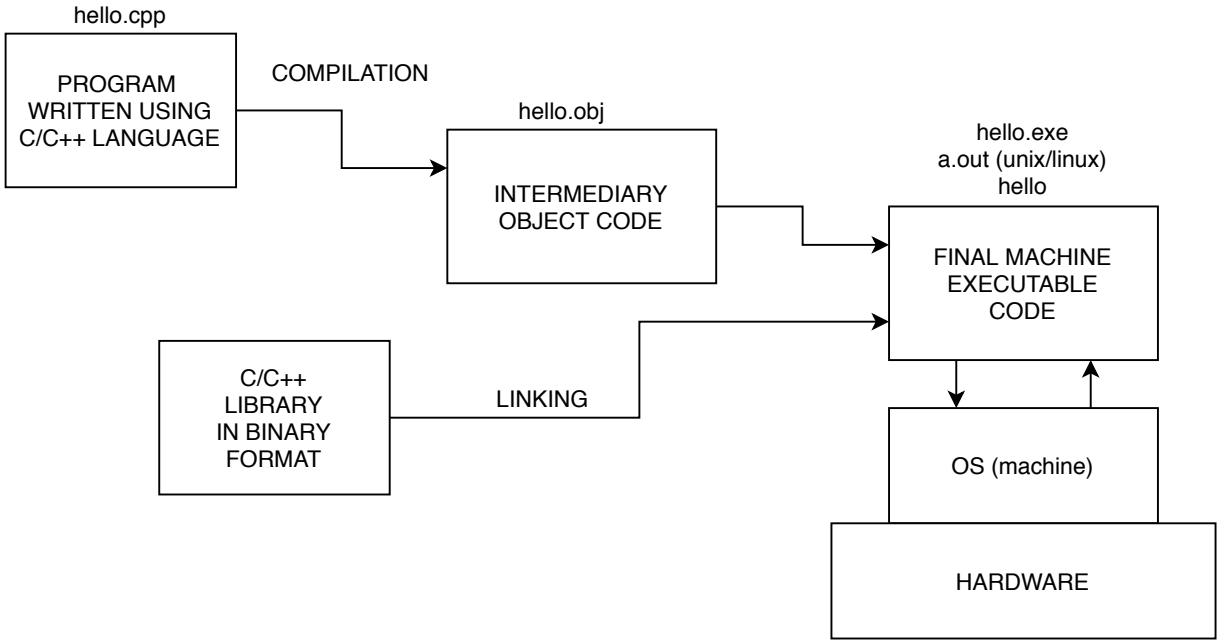
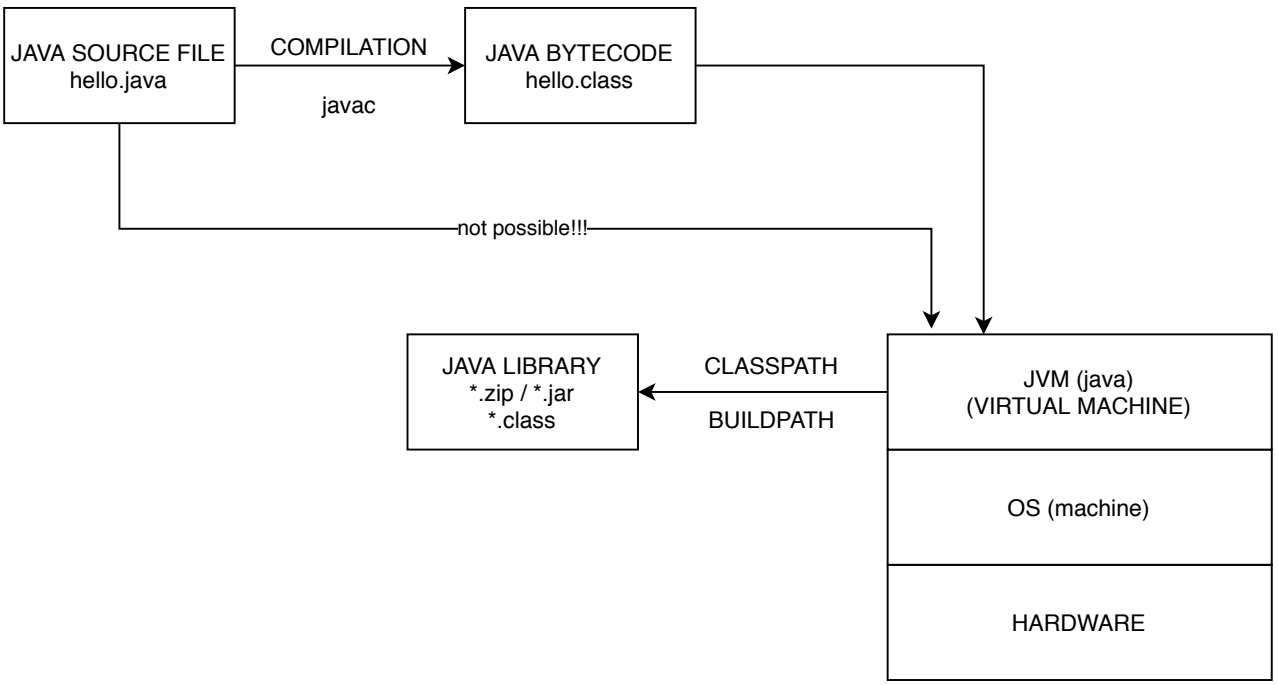
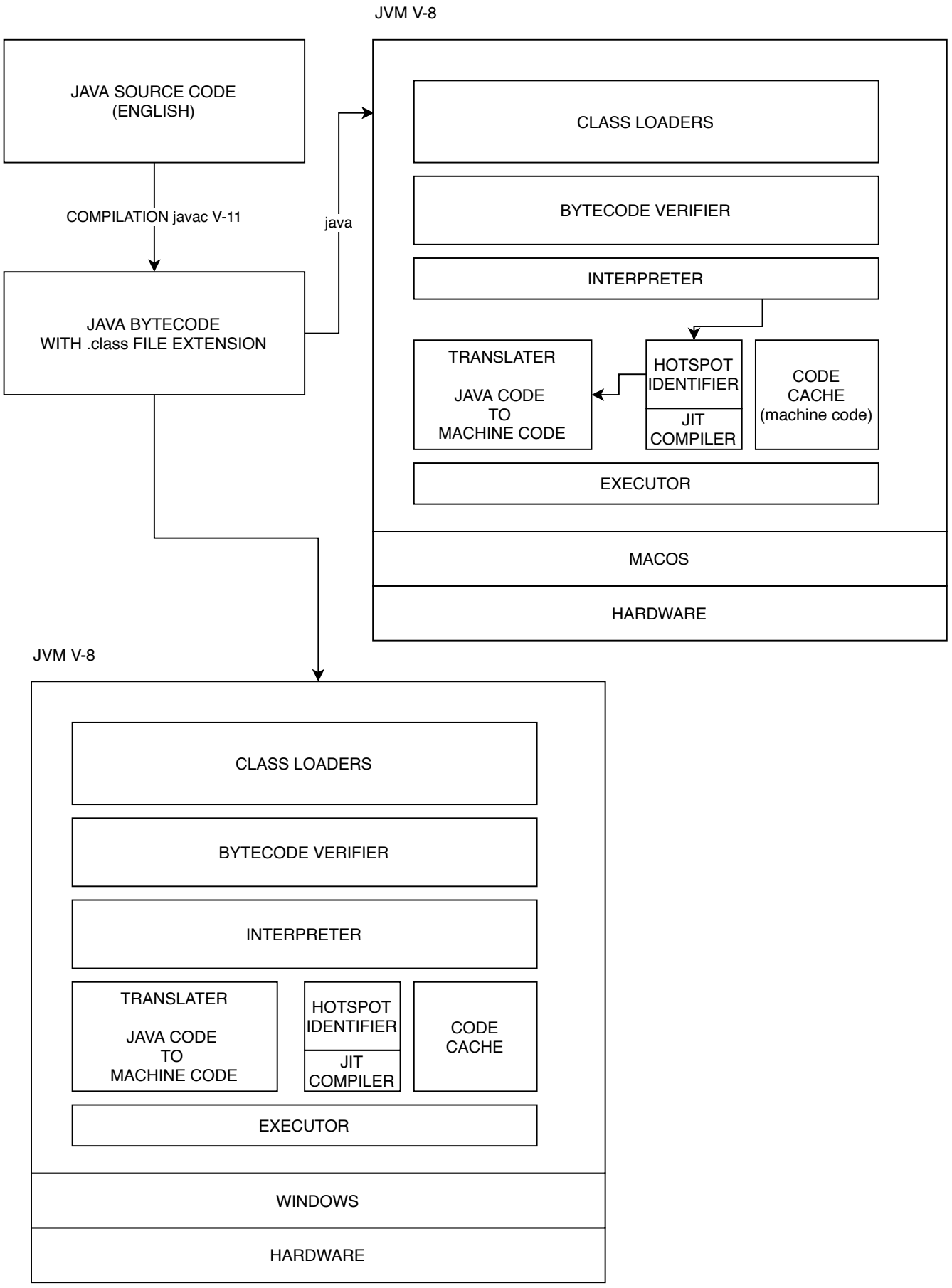

BROWSER ON USER'S COMPUTER
OMDBAPI.COM
EIS
FRONT END APPLICATIONS (HTML+CSS+JS) ANGULAR / REACT
REQUEST
RESPONSE
MIDDLEWARE
GENERATE THE HTML/CSS/JS (old)
ReST ENDPOINTS (WEB APIs)
WRITTEN USING: JAVA/C#/NODE/PHP/PYTHON/DENO/RUST/GO
RDBMS
XML FILE
EXCEL
SAP/ERP
WEB SERV.
NO-SQL-DB


hello.cpp
PROGRAM WRITTEN USING C/C++ LANGUAGE
COMPILATION
hello.obj
INTERMEDIARY OBJECT CODE
hello.exe
a.out (unix/linux)
hello
FINAL MACHINE EXECUTABLE CODE
C/C++ LIBRARY IN BINARY FORMAT
LINKING
OS (machine)
HARDWARE


JAVA SOURCE FILE
hello.java
COMPILATION
javac
JAVA BYTECODE
hello.class
not possible!!!
JAVA LIBRARY
*.zip / *.jar
*.class
CLASSPATH
BUILDPATH
JVM (java)
(VIRTUAL MACHINE)
OS (machine)
HARDWARE


JVM V-8
JAVA SOURCE CODE
(ENGLISH)
COMPILATION javac V-11
JAVA BYTECODE
WITH .class FILE EXTENSION
java
CLASS LOADERS
BYTECODE VERIFIER
INTERPRETER
TRANSLATER
JAVA CODE
TO
MACHINE CODE
HOTSPOT
IDENTIFIER
JIT
COMPILER
CODE
CACHE
(machine code)
EXECUTOR
MACOS
HARDWARE
JVM V-8
CLASS LOADERS
BYTECODE VERIFIER
INTERPRETER
TRANSLATER
JAVA CODE
TO
MACHINE CODE
HOTSPOT
IDENTIFIER
JIT
COMPILER
CODE
CACHE
EXECUTOR
WINDOWS
HARDWARE

Variables:
1. Primitives (value types)
2. References

Primitives:

8 of them, all of them are created using keywords.

1. integer (whole numbers) types
byte (1), short (2), int (4), long (8)

2. real numbers
float (4), double (8)

3. character type
char (2)

4. logical type
boolean (1 bit) - true/false

All primitives also have corresponding wrapper classes:
Byte, Short, Integer, Long
Float, Double
Character
Boolean

References:

Variables created using any of the following:
(anything other than primitives)

1. class
2. interface
3. enum
4. annotation
5. arrays of any type (including primitives)

A reference variable itself occupies 8 bytes (in a 64 bit OS/Java)