JA111

Day-1

Java Introduction

➤ Author: James Gosling
➤ Organization: SUN Microsystems, now oracle it is
➤ Launching Year: 1995
➤ Initial name: oak, then renamed to java
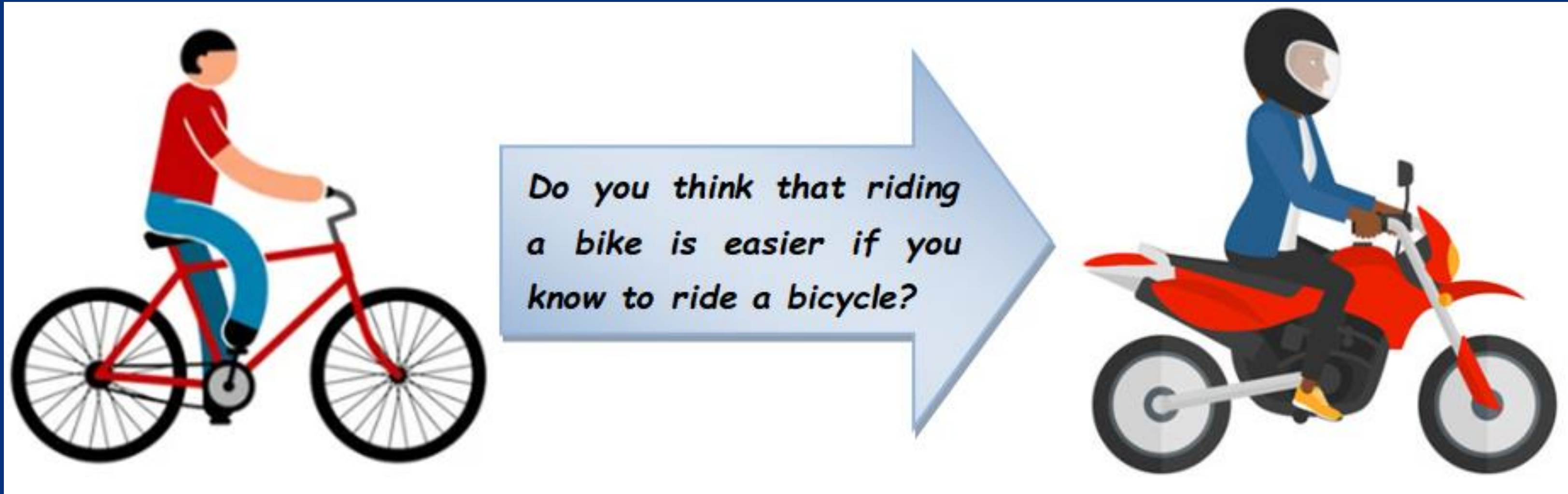➤ develop desktop, web and mobile applications

Java Editions
❖ Java Standard Edition (SE)
❖ Java Enterprise Edition (EE)
❖ Java Micro Edition (ME)

Java Features

1. Simple

Do you think that riding a bike is easier if you know to ride a bicycle?

➢ Syntaxes Similar to previous languages
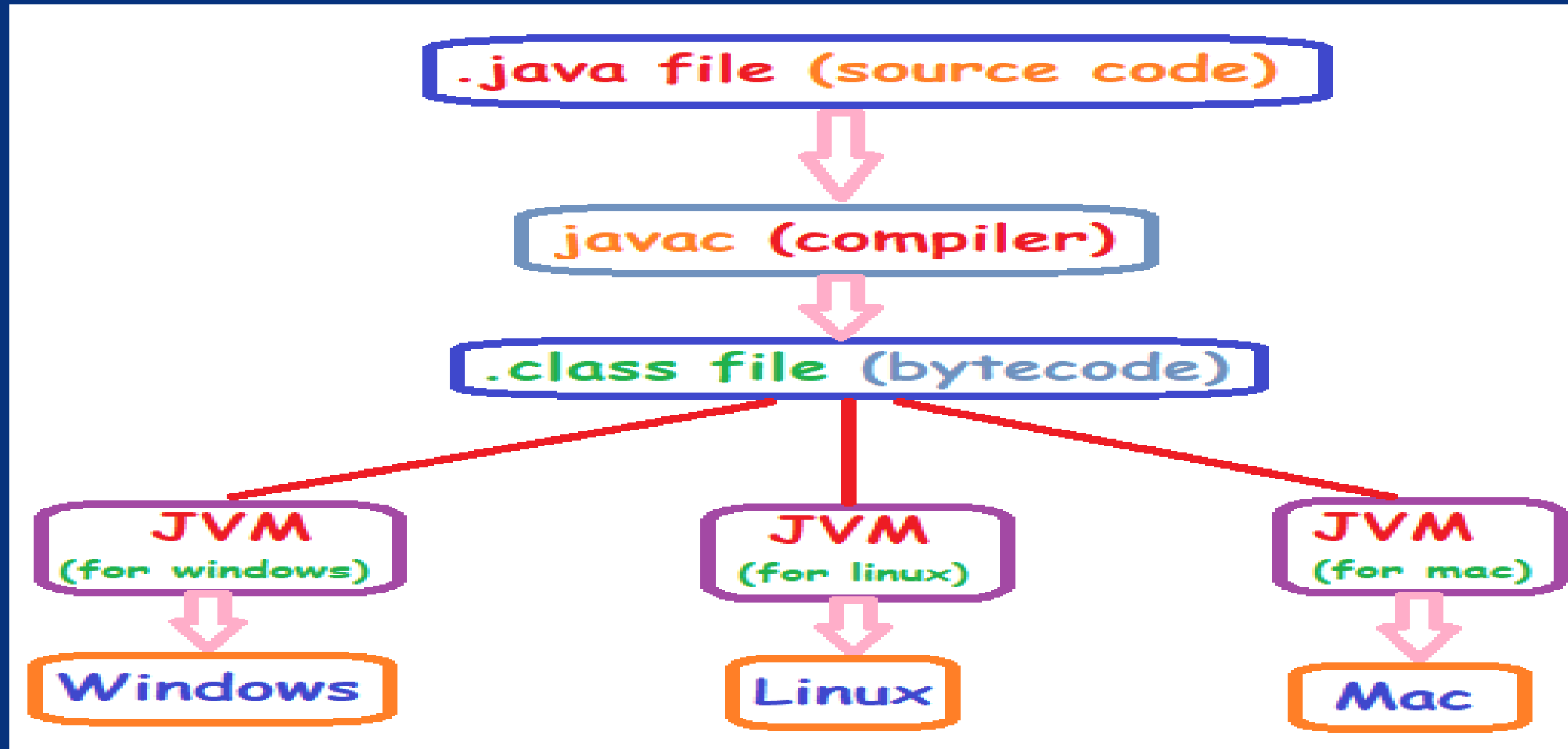➢ Automatic Memory Management

Java Features (Contd.)

2. Portability
Think about the charger which is very useful for stores that repair phones & for electrical sockets that people us for charging their phones at railway station

Java Features (Contd.)

2. Portability (contd.)

.java file (source code)

↓

javac (compiler)

↓

.class file (bytecode)

JVM (for windows) → Windows

JVM (for linux) → Linux

JVM (for mac) → Mac

Architecture Neutrality
=
Write Once
Run Anywhere

Java has
standard data type i.e.
No implementation
dependant data type

Portability = Architecture Neutrality + Standard Data type

Java Features (Contd.)

3. Interpreted
4. Security
5. Object Oriented
6. Robust
7. Multithreaded

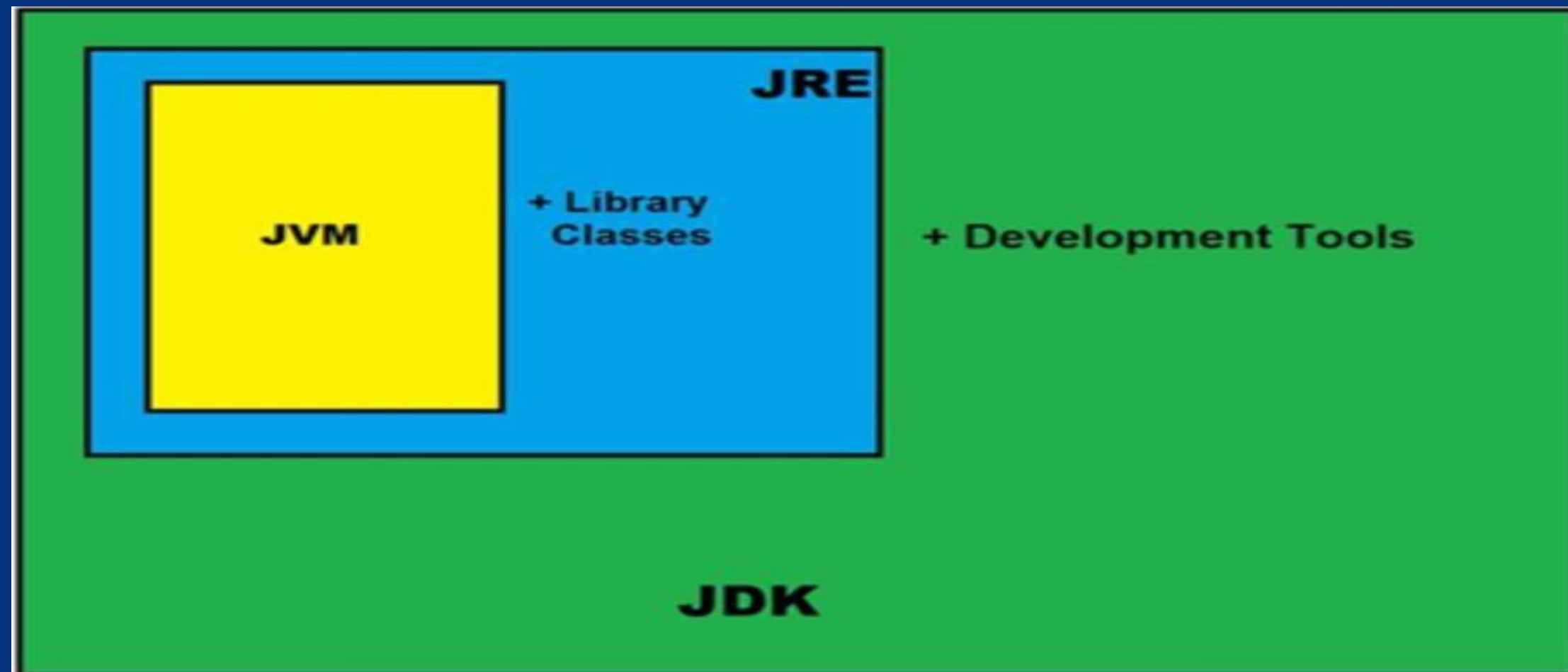# Installation and Path Setting

1. Download the setup from the following link
   https://www.oracle.com/in/java/technologies/downloads/
2. Set the path for variables JAVA_HOME and PATH

JDK & JRE

JDK (Java Development Kit) is used when you want to develop and run the java code

JRE (Java runtime environment) is used when you want to run the java code but not to develop the java code; Both JVM and JRE contains the JVM

The first java Program

```
/*
  This is a simple java program to print Hello World
*/
package com.masai;

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

```
some-path/com/masai>javac Main.java
some-path>Java com.masai.Main
Hello World
```

Naming conventions for java

for packages
All-lowercase ASCII letters and should be one of the top-level domain names
Subsequent components of the package name vary according to an organization's own internal naming conventions
e.g. com.sun.eng, edu.cmu.cs.bovik.cheese, com.masai.curriculum

for class name and interface
Should be nouns, in mixed case with the first letter of each internal word capitalized.
e.g. SimpleInterestCalculator, ThreadGroup

for class name and interface
Should be verbs, in mixed case with the first letter lowercase, with the first letter of each internal word capitalized
Variable names should be short yet meaningful.
e.g. getInterestAmount(), runFast()

Naming conventions for java (Contd.)

for variables

All instance variables, class, and class constants are in mixed case with a lowercase first letter. Internal words start with capital letters.
e.g. principleAmount, length, totalBillAmount

Tip: One-character variable names should be avoided except for temporary "throwaway" variables. Common names for temporary variables are i, j, k, m, and n for integers; c, d, and e for characters.

for Constants

The names of variables declared class constants and of ANSI constants should be all uppercase with words separated by underscores ("_").
e.g. MIN_WIDTH, CPU_CORES, MAX_PRIORITY

QUERY?