# JAVA – Basics

Lecture 1

# Real World Applications

Android Developer

Selenium (Tester)

SAP (Webapp)

Magic Frame work(for geographic location)

Cloud computing

MDM ( Master Data Management )

Android Developer

SAP (Webapp)

Selenium (Tester)

**Therefore Java!!**

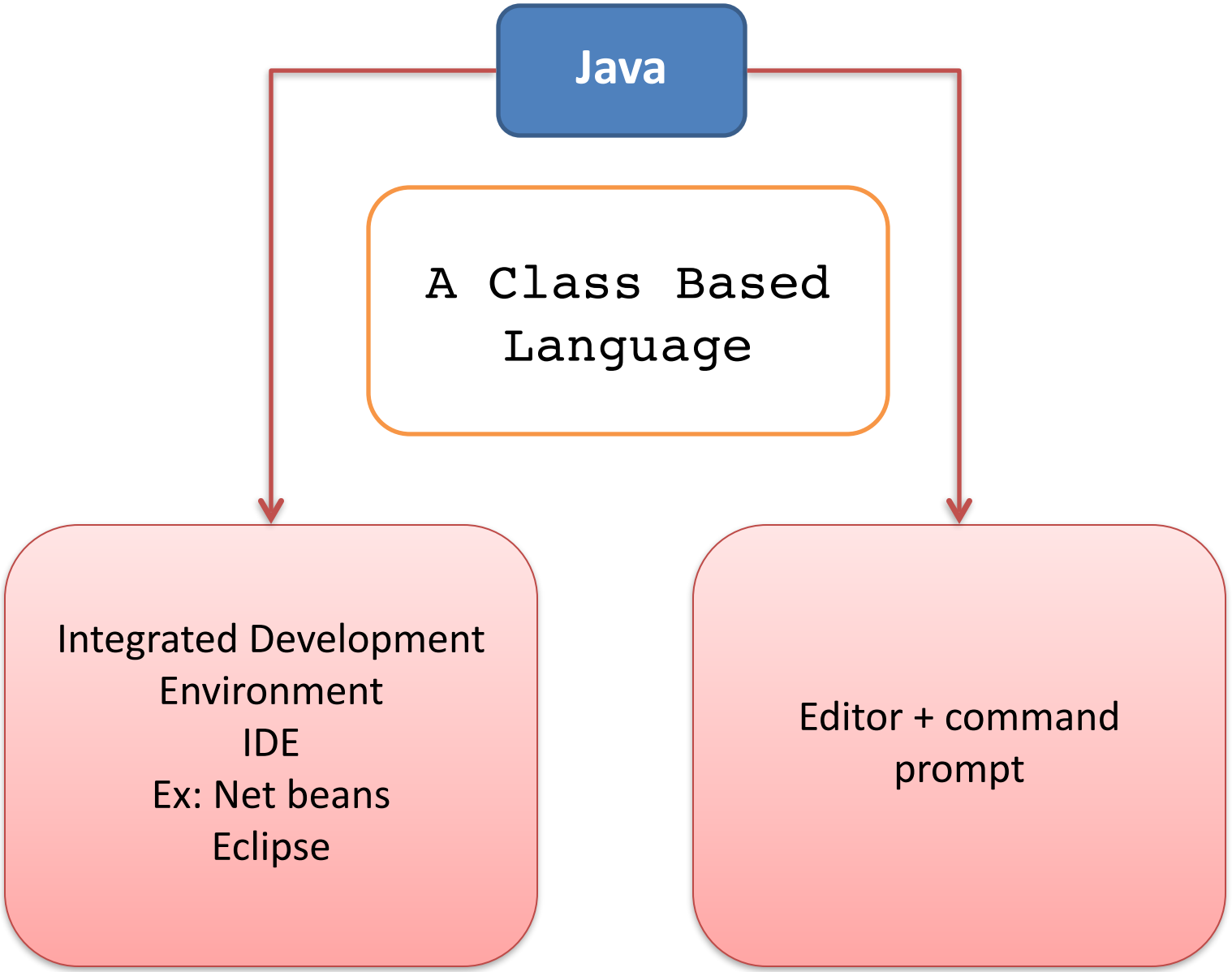
Hadoop (Big Data Developer)

Web services

Application Development Framework

Cloud computing

Magic Frame work(for geographic location)


Java
A Class Based Language
Integrated Development Environment
IDE
Ex: Net beans
Eclipse
Editor + command prompt

C

```c
#include <stdio.h>
int main()
{
    printf("Hello!!");
return 0;
}
```

Program to print Hello!!

JAVA

```java
import java.io.*
public class Main
{
public static void main(String[] args)
    {
    System.out.println("Hello!!");
    }
}
```

```
import java.io.*
public class Main
{
public static void main(String[] args)
        {
        System.out.println("Hello!!");
        }
}
```

Predefined classes

main is inside a class!!

C

```c
#include <stdio.h>
int main()
{
    printf("Hello!!");
    return 0;
}
```

Procedural language

JAVA

```java
import java.io.*
public class Main
{
    public static void main(String[] args)
    {
        System.out.println("Hello!!");
    }
}
```

Class based language

C

```c
#include <stdio.h>
int main()
{
    printf("Hello!!");
return 0;
}
```

Predefined support – header files

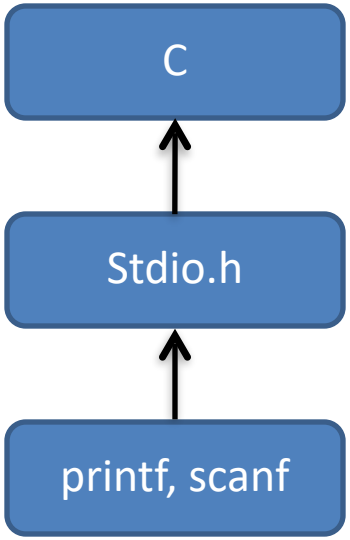
JAVA

```java
import java.io.*
public class Main
{
public static void main(String[] args)
        {
        System.out.println("Hello!!");
        }
}
```

Predefined support – classes present in packages

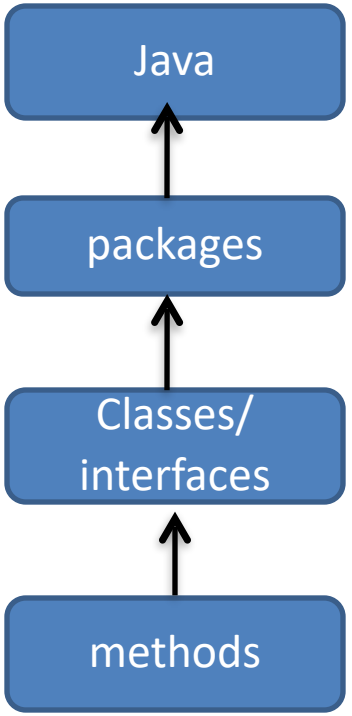
C

Header files contains functions




JAVA

Packages contains classes and interfaces → Classes contain methods



| C | JAVA |
| --- | --- |
| OS calls the main method | JVM calls the main method |
| printf | System.out.println |

# JAVA - Introduction

- Object Oriented Programming Language
  - Every JAVA program has at least one class
- Filename Extension:
  - Foo.java
  - Class name Vs. File name
- Assume this is a template

```
1   class Foo
2   {
3     public static void main(String args[])
4     {
5       //Type your code here
10    }
11  }
```

# Program - “Hello world”

```
1  import java.io.*;
2
3  class Foo
4  {
5    public static void main(String args[])
6    {
7      System.out.println("Hello world!!!");
8    }
9  }
```

# Getting User Input

```
1  import java.io.*;
2  import java.util.*;
3
4  class Foo
5  {
6    public static void main(String args[])
7    {
8        Scanner sc = new Scanner(System.in);
9        int a = sc.nextInt();
10       System.out.println(a);
11   }
12 }
```

# Adding two numbers

```
1  import java.io.*;
2  import java.util.*;
3  class Foo
4  {
5    public static void main(String args[])
6    {
7        Scanner sc = new Scanner(System.in);
8        int a = sc.nextInt();
9        int b = sc.nextInt();
10       int c = a + b;
11       System.out.println(c);
12   }
13 }
```

# Convention

```
1  import java.io.*;
2  import java.util.*;
3  class Foo
4  {
5    public static void main(String args[])
6    {
7        Scanner sc = new Scanner(System.in);
8        int a = sc.nextInt();
9        int b = sc.nextInt();
10       int c = a + b;
11       System.out.println(c);
12   }
13 }
```

- Only core logic will be discussed
  - Highlighted one

# Program – " All numbers are Equal"

```
Input : a,b,c
If ( all three inputs are equal)
{
    print - equal
}
else
{
    print - not equal
}
```

```
import java.util.*;
public class Main
{
public static void main(String[]
   args)
{
   Scanner s=new Scanner(System.in);
   int a,b,c;
   a=s.nextInt();
   b=s.nextInt();
   c=s.nextInt();
   if(                          )
        a==b && a==c
                          tln("equal");
   else

   System.out.println(" Not
            equal");
}
}
```

# Try these

1. Average of three numbers
2. Factors of a number
3. Factorial of a number


Thank
you!!