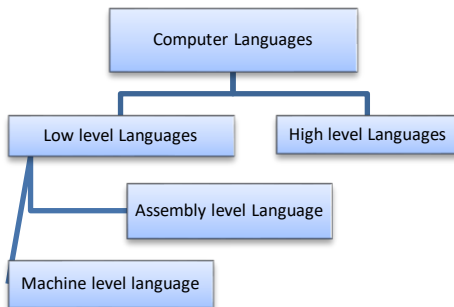


# WELLAND GOULDSMITH SCHOOL

## CLASS-IX

### COMPUTER APPLICATIONS

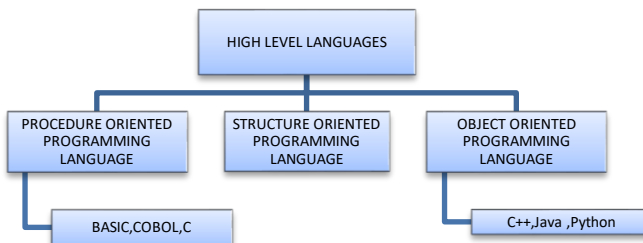
#### Introduction to Object Oriented Programming Concepts



- Machine language uses 0's and 1's
- Machine language is fast but error correction is difficult
- Assembly level language uses mnemonics and op-codes.
- They need an assembler to change the code to Machine code.

#### **HIGH LEVEL LANGUAGES NEED LANGUAGE PROCESSORS LIKE COMPILER AND INTERPRETER**

- Compiler converts the whole program at one go.
- Interpreter changes one line at a time.
  - Java program is both compiled and interpreted.



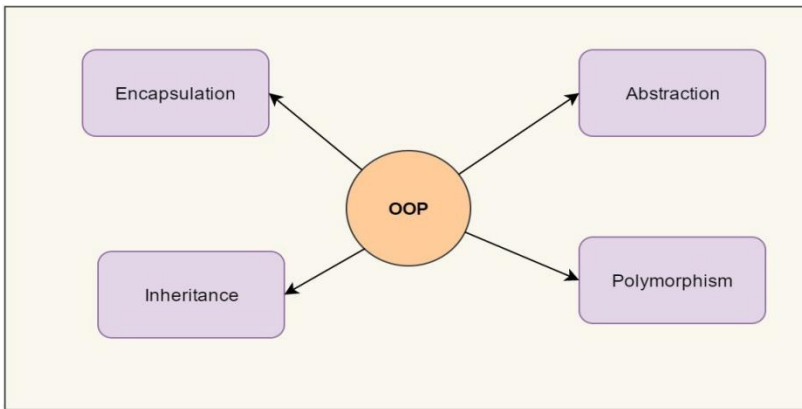
#### **Features of Procedure oriented language:-**

- It focuses on process rather than data.
- It takes a problem as a sequence of things to be done such as reading, calculating and printing. Hence, a number of functions are written to solve a problem.
- A program is divided into a number of functions and each function has clearly defined purpose.
- Most of the functions share global data.
  - Data moves openly around the system from function to function.

## FEATURES OF OBJECT ORIENTED PROGRAMMING:-

- Emphasis on data rather procedure.
- Programs are divided into units called “Objects”.
- Objects used to communicate with each other through functions.
- New functionality can be easily developed by creating objects and functions.

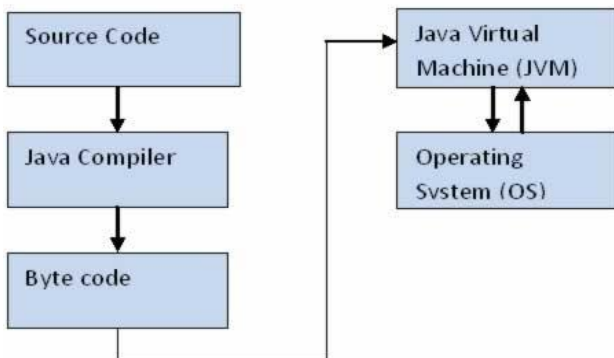
## BASIC PRINCIPLES OF OOP



## BASIC FEATURES OF JAVA

- Developed by JAMES GOSLING at Sun Micro Systems.
- It is an object oriented language.
- It is case sensitive.
- Both compiler and interpreter are used.
- Java is best known for its security.
- Java is portable because it facilitates us to carry the Java bytecode to any platform. It doesn't require any implementation.

## HOW JAVA WORKS:



## **BASIC JAVA PROGRAM USING BLUEJ**

```
public class Addition //Declaration of class
{
    public static void main() //main function
    {
        int a=10,b,c=0; //declaration of variables

        b=20;

        c=a+b;

        System.out.println("The sum is="+c);
    }
}
```

### **Answer the following questions:**

- 1. Explain Inheritance with an example.**
- 2. Name any two Object Oriented Language.**
- 3. import java.io.\***

What is the function of \* and import in the given statement.

- 4. What is function overloading? Which feature of Java allows it?**
- 5. State two advantages of Encapsulation in OOP.**
- 6. Distinguish between:**
  - a. Assembly level language and machine level language
  - b. Procedure oriented language and object oriented language
- 7. Explain Base class and Derived class.**
- 8. Who developed Java? What was it first called?**

.

**9. Write two differences between class and object.**

**10. What is a source code? What happens to it after passes through Compiler in Java?**

**11. Why comments are used in a Java program?**

**12. Write any two features of Blue J.**

**13. Explain the output statement of Java with an example.**

**14. Why machine level language is faster than Assembler**

**15. Write a program to find the sum, difference and product of 45 and 90 and display the answers**

**Note:-Pg 13-14.Exercises to be completed (objectives in the book and v,vi in the exercise book.)**

**Pg-26.Exercises to be completed(objectives in the book and iii(5,6,13,14,15,16,17,18 in the exercise book)**