**JDK** Java development kit: Compiler+ libraries

**JRE** Java runtime environment: Interpreter +JVM

**JVM** Java virtual machine: abstract machine, which execute the byte code

**Inheritance:** one object or class acquires the properties of another object or class. ie.reusability

**Polymorphism:** ability to define entities fields to attain many forms

**Absraction:**  method to hide implementation details(hide implementation)

**Encapsulation:** wrapping or binding the code and data it manipulates(hide data)

## **Keywords:**All predefined 50 or 53 meaningful words

## **Constants:** Non changeble value by user, in Java it declare by word final, static

## **Variables:** Value that can change, basic unit of storage

## **Datatype:** Predefined memory location , storage and variable declaration

### **String handling:** predefined class file, sequence of char or array of char

## **Operator:** Symbol that perform operations

## **Decision making:** allow program to choose different paths of execution, by comparision

## **Loops:** enable program execute until condition true

**Object oriented Programming:**based on object(real world entity)

**Class:**Blueprint or template for object

**Object:** Instance of a class, an entity which have state and behaviour

**Constructor:** a special type method that instialize object

**Garbage Collection:** Automatic recycle for object which has no references

**Finalize method:** called by garbage colletor before non reference object collected

**Methods:** set of instruction or task that perform when it calls

### **Array**: group of similar datatype variables that are referred to a common name

**Static:** used for memory management, have only one copy, not need object to instialize

**This**: is a reference that refers to the current object

**Super**: is a reference that refers to immediate parent class object

**Final:** define an entity that assigned once, cannot be reassigned, overridden, inherited

**Package:**group of similar type of classes, interfaces and subpackages

**Import:** make classes and interface of another package accessible to the current package.

**Abstract class:** class with keyword abstract, contains both abstract and non abstract method, cannot be instantiated, can be extended. 0-100% abstraction

**Abstact Method:**have only declaration, no body. present inside only abstract class

**Interface:** is a reference type in Java. to implement 100%abstraction contains no implementation. and require subclasses to provide implementations

**Exception handling:** mechanism to handle runtime error. to maintain normal flow of program

object->Throwable->

|  |  |  |
| --- | --- | --- |
| 1.a.Exception (checked) | 1.b.Runtime exception(unchecked) | 2.Error |
| a.IOException  b.SQLException | a.ArithmeticException  b.NullPointerException c.NumberFormatException | a.virtualMachineError b.IOError  c,AnnotationFormatError |

**Multithreading:**process of executing multiple programs run concurrently at same time

**Collection:** a frame work that store and manipulate group of object

**Remote method invocation:** is an API that provides a mechanism to create distributed application in java. The RMI allows an object to invoke methods on an object running in another JVM.

**JDBC:** is a java API to connect and execute query with the database

**Serialization:**converting object is convert in to bytecode

**Wrapper class**-provides mechanism to convert primitive into object and object into primitive.

**Equals:**compare the reference of the object

\*java beans and enterprise java beans are totally unrelated

\*== and .equals() are not the same.

Comparing 2 objects with == means their references are compared and not their values. To compare values .equals() functions is used.

String pool: Pool of strings stored in java heap memory

Java StringBuffer: mutable (modifiable) string. synchronized(thread safe).less efficient

Java StringBuilder:mutable (modifiable) string. non-sync (not thread safe) more efficient

Assertion: is a statement in java. It can be used to test your assumptions about the program.

**JDBC:** allow application to connect relational database