INTERVIEW QUESTIONS

Core Java:

It is high level programming language and also object oriented programming language which is developed by sun micro systems.

Features:

>Platform independent Programming language
>Object Oriented programming language
>Security
>Which supports Multi-Threading
>Having Exception Handling

Explain Difference between JDK , JRE and JVM?

JDK: JDK which java development kit,where having tools and libraries which helps for developers to develop Application.
JRE: JRE which means java runtime environment, which helps execution java having java virtual machine and class libraries and aother components to execute java programs.
JVM:JVM which java virtual machine, which one main for running java bitcodes which compile source codes and also provide runtime for java programs.

Explain OOPS concept?

Encapsulation:

* It is one of the object oriented programming structure.
*In this we discuss about to keep data secure.
* In this we have observe that particular variables to keep with private keyword.,
*which can access by using setters and getters.where set the value and get the value.
* setters which is to be with set method where no return type.
* getters which is to be with get method where return type is there.

InHeritance:

* It is one type of object oriented programming structure.
* it is defined where inherit the properties from parent to child class by using keyword “extends”.which is also known parent-child relationship or is-a relationship.
* it used for reusability.
* Multilevel inheritance is allowed which means one parent class have no.of child classes.
* where multiple inheritance is not allowed.
*private members are not participate in

inheritance(because of encapsulation purpose no one can access outside the class using private keyword)
*Constructors are also not allowed where in constructor default method is super method which can call parent class constructor.

Polymorphism:

* Polymorphism is a concept of Object oriented programming where allows object to different classes where treated as object for common super class.
* It is mainly for making FLEXIBILITY.
*Polymorphism is happen by method overloading or Method Overriding.

Abstraction:

*It is also concept of object Oriented Programming structure which means hiding actual implementation show caseing features.
*where not having Body,
*Abstraction can be happened by two main mechanisms I.e, Abstract class and interface.

Exception Handling:

*Exception means a mistake takes place during runtime results as a abnormal termination,As a developer we want to handle Exception by
Using try-catch block.

MultiThreading:
* The process of executing multiple threads simultaneously.
Thread: Thread is light-weight sub process,which means small unit in a program
JVM will control the thread by support of java scheduler.

Synchronisation:The Process of making thread safe ,no thread will enter until particular thread will execute.

Thread Priority:which means based on setPriority method.
* default thread priority is 5
Min-Priority(1)
Normal-Priority(5)
Max - Priority(10)

Difference between Abstract class interface?

Abstract class:
Interface:
* Abstract class having abstract
* In terrace having abstract methods
Methods and non abstract methods

*Abstract class doesn't support
* Interface support multiple inheritance
Multiple inheritance

* Abstract class having final &
* Interface having only final and static methods
Non final and static and
Non-static variables

* Abstract can provide implementation of intreface
* Interface cannot provide implementation of abstract class.

* It can done through using keyword
* It can don through interface keyword.
Abstract

Access specificers:

“Which can control the code visibility
Where have public, private, protected and default.

Constructor:

* A constructor is a special method in a class ,which is to be with class name and it is used to intilize the object with values.
* when a object is created with a “ new “ keyword where automatically object called takes place.and also constructor has parameter or no parameters(which is known as default

constructor)..
* No return type.
* public as per our requirement.
*Can constructor overload?
Ans: yes, with same method name of different parameters.

SUPER()-> which is to be default method in a constructor which parent constructor.
this(). -> by writing this method in a constructor, which is used to call the same class constructor.

this keyword-> which refers to current object.

Final keyword: It is mainly takes place for variables ,methods and classes.

When we mention the final keyword which makes it constant, it can't be changed until the execution.
When mention final to variables it makes constant can't be changed until execution.
When final keyword to methods it prevents mentor overriden.
When we mention final keyword to class it prevents from subclasses.

Throw:The keyword which is used handle exception and throw it back to exception object to the caller.
Throws : It is a method signature and commonly

used for checked exceptions.

Static keyword: static keyword which is used for particular variables, methods or blocks
* static variables which is to be for particular instances variables.by accessing theses static variables where using particular class name.
Static variable are also called as class variable.
* static method is tone where particular method is to be with static keyword is known as static method, where call the static method by using the particular class name.
* static block of code is executed when class is loaded.
* In static block any error takes place it refers to "ExceptionInInitilizeError."

Static methods
* static methods are called by using class name.
* using object reference.
*object independent
*generic methods .

Non-static methods
* we can call non-static methods by object creation is mandatory.
* using object reference
* object is dependent
*specific methods.

Difference between String ,string buffer and String builder?

String:which is non primitive type and also immutable but object reference can be changed.

String buffer:

*string buffer is mutable.
*String buffer is to be synchronised, which means thread safe, non thread will allow simultaneously.
*String buffer is less efficient as compare to string builder.

String builder:

* string builder which is also mutable
*string builder is not synchronised, which means thread is not safe and also thread will allow simultaneously.
*String builder is more efficient as compare to string buffer.

What is method Overload and method override?

* Method overload means same method name with different parameters
*Method Override:which an be happened in subclass where inherit from super class, By Override we can change behaviour of inherited method.

Class and object?

Class:

* class is a blue print, which can useful for object creation
* class is a logical entity
* no memory also allocation when class is created.
*without object can can create class

Object:

* object is instance of class.
* object is physical entity
*memory allocation is takes when object creation.
*But without class we cannot create object.

Explain Checked Exceptions and Unchecked Exceptions?

Checked exceptions:

* checked exceptions are checked during the compile time and programmer explicitly handle exception by try-catch block.
Examples:IOException,SQLException,FileNotFoundException.

UnChecked exceptions:

* Unchecked exceptions are also called as runtime exceptions, which not checked during compile time and also programmer not explicitly handle exceptions.

Examples:NullPointerException ,ArthimeticException and RuntimeException.

Marker interface:
* marker interface which means it didn’t;t have any certain abstract methods.

Adapter class
*It is a design pattern which is to solve problems of implementation of interface methods.

Wrapper class
* wrapper classes means to make primitive data types as objects.
*In wrapper classes string is not participated because String non-primitive data type.
*Every Wrapper class as contain two constructors.

1) valueOf method: Converting from pimitive /String into wrapper class.
2) xxxvalue method:Converting from Wrapper class to primitive/String.
3)parsexxx method:Converting String to primitive type.

AutoBoxing which means automatic conversion of primitive type to wrapper class.
Example:valueOf method
AutoUnBoxing:which means automatic conversion

of wrapper class to primitive type
Example:xxxvalue method

Var-arg Method: the method which having no. of arguments incase we write in one method.

new : Load .class files automatically.
newInstance:Don't load .class files automatically we want call manually as class.forName().

Functional interface:which means having one abstract method in interface.

Collections API:
* It is requirement for stroring large data and also not type-safety and also in this we discuss about 7 different classes
1) ArrayList(Dynamic Array D.S)
2) LinkedList(Doubly linked D.S)
3) ArrayDeque(Double end Que D.S)
4) Priority Que(min heap D.S)
5)Treeset((Binary search tree D.S)
6)Hashset(Hashing D.S)
7) Linked Hashset

1) JDBC:

*JDBC means java database connectivity which means it allow to communicate with database and also perform
Database operations.

Advantages of JDBC:

1) database probability
2) easy connection with database
3)secure and authentication
4) efficient
5)SQL capabilities

MAIN STEPS IN JDBC:

1) Load and register the Driver
2) establish the connection with database
3) create a statement object and send the query
4) execute the query and process the Results
5) handle the sql exceptions if any generated.
6) close the connection.

2) AutoLoading JDBC:

* Loading and register the driver is automatically.

3)Driver classes for oracle,mySQL and SQLlite Database

1) Oracle:

Oracle.jdbc.driver.oracledriver

2). MySQL:

Com.mysql.jdbc.driver

3)SqlLite Database:

Org.sqllite.JDBC

4)Factory/or Helper methods for following

1) statement:

Method: createsatement();

Statement statement=connection.createstatement(sqlQuery)

2) Preparedstatement:

Method: createpreparesatement();

Preparedstatement prepstatement=connection.createpreparestatement(sqlQuery)

3) Resultset:

Statement statement = createstatement()

Results resultset = statement.executeQuery(sqlQuery)

5) PlaceHolders role preparedstatement and callablestatemnt in jdbc

*place holders are plays a crucial role in preparedstatement and callablestatement

* preparedstatement:It is a pre-compiled sql statement which parameterised and execute multiple times with different parameters.

*Which denoted with(?) in preparedStatement

Callablestatemnt:which is execute for stored procedure or functions and it supports both input and output parameters.

Callablestatement is denoted by (:)

6)Core interfaces in JDBC?

1)connection

2)statement

1) Preparedstatement

2) callable statement

3) Resultset: it represents certain results from execute SQLQuery and it provides navigation to results and retrieve the data from it.

7) Difference between statement and prepared statement?

Statement:it can execute sql query only one time,

And also we cannot pass parameters during runtime.

Performance is low

It is only excute normal Sql query

prepared statement:It can execute sql query with multiple times

And we can pass parameters during runtime

Performance is high

We can execute dynamic sql queries

Connection pooling:

Connection pooling is technique in JDBC having pool of database connections are ready to connect with applications.

Advantages:

1) improved connection
2) reuse of connection as well
3) connection management.

Transaction Management:

It refers to perform all related operations at single unit is know as transaction management

It follows ACID properties

Two types:

1) local transaction which means perform under same database.
2) Global Transaction which means perform under different database.

*JDBC follows only local transaction, for global transaction go for hibernate/Spring

Handle the Transaction steps involved are:

1) Disable auto-commit
2)perform database operations
3)commit the transaction
4) rollback the transaction
5) Enable the auto-commit

Batch processing in JDBC?

The batch processing in JDBC which refers to execute multiple sql statements in a batch
Steps involved are:
1) create statement
2) Add sql statements to batch
3) Execute the batch
4) retrieve the results

Advantages:
1) reduce time
2) good improvement
3)data server efficiency

executeQuery():

Which means it suitable for select operations

executeUpdate():

Which is for non-select operations that means(insert, update/delete)

execute():

Which is for both select & non-select operations.when we don't know the type of query at beginning we go for it.

SavePoint(I):
Within a transaction, if you want to rollback for

particular group operations based on some condition then we
Need to use savepoint.

Rowset:
It is an alternative to results.
We can use rowset to handle group of records in more effective way than resultset.
* results is parent type and roust is chid type where we can inherit from resultset to rowset.f