**148. What are inner Classes?**

1. Following are the different types inner classes:

a. Nested Inner Class

b. Local inner Class

c. Anonymous inner Class

e. Static inner Class

2. A Class within class is called inner class.

3. To reduce complexity, repetition and other things, we use inner classes.

4. Interface can also be defined inside a class.

5. Inner class can access the variables/ members of outer class.

6. Inside outer class we can create an object of inner class.

7. We can access members of 1inner class only using its object or by declaring it static.

8. To create object of inner class outside the outer class:

Outer.Inner oi = new Outer().new Inner();

9. Outer$Inner.class this file is created when program is compiled. Which means its directly related to outer class.

10. We can’t create object of inner class without creating object of outer class.

**149.Demo: Nested Inner Class**

1. In Java we can create the object and then define its class.

2. For every class a class file is generated in java.

**150. Local and Anonymous Inner class.**

**Local Inner Class:**

1. We can define a class inside the method.

2. That class will be accessible only in that method.

3. It is usually useful when you are inheriting the class or implementing an interface.

**Anonymous Class/ Anonymous Inner Class:**

1. It can be defined at time of definition of an object. You can define the class as well as object.

2. It is useful for interface and abstract classes.

3. Creating object of a class overriding function and inheriting the class. The new class will not have name but the reference of base class. (Concept of Dynamic Dispatch is used here.)

4. Same thing can also be done with interface.

5. If you have to implement the interface but it has only limited interface then and there, we can use concept of Anonymous class.

**151. Static Inner Class.**

1. The object of static inner class can be created outside the outer class without creation of outer class.

2. The static inner classes can access only static members of outer class; it does not access the non-static members.

3. For example:

Outer.Inner oi = new Outer.Inner();

\*No object of outer class is created.

**152. Demo: Local and Static Inner Classes.**

1. Static inner class can only access static members of outer class.

2. Inner class extend only one class or implement exactly one interface.

2 Method-local inner class can be marked abstract.

**153.**