Assignment - ② Java (22)

A. Harsha Vardhan
192365011
CSA0985

① what is in heritance and describe the types of inheritan

Sol:

Inheritance:

The method to create a hierarely b/w closes by inheriting from other classes

There are 5 types of inheritance

1. Single inheritance
2. Multi inheritance
3. Multiple inheritance
4. Hierachial inheritance
5. Hybrid inheritance

in this Mulfiple inheritance doesnot support Java to Overcome we we interface.

Single Inheritance:-

```
Class A {
    int a;
    void displayA() {
        system.out.println("a="+a);
    }
}
class B extands A {
    int b;
    void displayB() {
        system.out.println("b="+b);
    }
}
public class Single inheritance Example{
    public static void main(String[] args){
```

```
        B obj = new B();
        obj a = 20;
        obj b = 30;
        Obj : display A();
        obj : display B();
    }
}
```

Output:-

a=20 : b=30

Multilevel inheritance

```
class A {
    public void display A(){
        system.out.println ("Inside display A"); }
}
    class B.extends A{
        public void display B() {
    system.out.println("Inside display B");
    }
}
    public class main {
        public static void main (String[] args) {
            C obj = new C();
            obj : display A();
            obj : display B();
            obj : display C();
        }
    }
```

Output:-

This animal eats Food
The dog barks
This animal eats Food
The cat meows.

Multiple Inheritance:

```
    class A {
        void method A() {
            System.out.println ("method From class A");
        }
    } Interface B {
```

```
Void methodB();
}
Interface C {
void methodC();
}
class B extends A implements B,C {
        public void methodB(){
System.out.println("Method from interface.B");
} public void methodC(){
  System out.println("Method from interface C");
}
} public class multiple inheritance.example {
        public static void main (String[]args){
                D obj = new D();
Obj:methodA();
Obj: MethodB();
Obj: MethodC();
```

Output:-

Method from class A

Method from Interface B and C

Hybrid inheritance:-

```
class GrandFather{
        public void display:showG(){
   System.Out.println("He is grand-father");
  }
}
Class Father extends Grandfather{
        public void showF(){
  System.out.println("He is Father");
}
}
  Class Son extends Father{
        public void showsS(){
```

```
    System.out.println("He is son");
}
public static void main (String args[]){
    Son obj = new son();
    obj.shows();
    obj.showF();
    obj.showG();
    Daughter.obj2 = new Daughter();
```

## Exception Handling:

Exception is an error that occurs during the exceptio
of program key components of Exception handling.

1. Try block:- This is where you write the code that might throw an exception. if an exception occurs the executi of the block stops.
2. catch block:- this is block contains code that is executed Block of code to be executed if an error occurs in try
3. Finally block - This block contains code that is executed regardless of whether an exception was thrown or not.
4. throw statement:- This is used to explicity thrown an exception from a method or block of code