**Types of inheritance:**

1)Single Inheritance

2)Multilevel Inheritance

3)Hierarchical Inheritance

4)Multiple Inheritance

5)Hybrid Inheritance

**1)Multilevel Inheritance:**

public class Animal

{

private String name="sri";

private int val=10;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getVal() {

return val;

}

public void setVal(int val) {

this.val = val;

}

}

public class Dog1 extends Animals

{

public void sounds()

{

Animals ans = new Animals();

ans.setName("dobar dog makes big sound");

System.***out***.println(ans.getName()+"dobar dog age is"+age);

}

}

public class BabyDog extends Dog1

{

public void smallSounds()

{

Dog1 dg1 = new Dog1();

dg1.setName("Bull dog males small sounds");

System.***out***.println(dg1.getName());

}

}

public class MainClass2 {

public static void main(String[] args)

{

BabyDog bd = new BabyDog();

bd.smallSounds();

bd.sounds();

bd.eat();

}

}

**2)Single Inheritance:**

public class Animal

{

private String name="sri";

private int val=10;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getVal() {

return val;

}

public void setVal(int val) {

this.val = val;

}

}

public class Dog extends Animal

{

private void shouting()

{

System.***out***.println("dog barking");

}

}

public class MainClass

{

public static void main(String[] args)

{

Animal ani = new Animal();

ani.getName();

ani.getVal();

System.***out***.println(ani.getName());

}

}

**3)Hierarchical Inheritance**

public class HeiraOne

{

private String name;

private int NofDist;

protected String Ap="Jagan Mohan Reddy";

protected String Tn="stailn";

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getNofDist() {

return NofDist;

}

public void setNofDist(int nofDist) {

NofDist = nofDist;

}

public void india()

{

System.***out***.println("india has total 29 countruies");

}

}

public class Andhar extends HeiraOne

{

public void andhraPradesh()

{

HeiraOne ap = new HeiraOne();

ap.setName("Andhra Pradesh has total no of Districts");

ap.setNofDist(13);

System.***out***.println(ap.getName()+""+ap.getNofDist()+"present cm is"+Ap);

}

}

public class Chennai extends HeiraOne

{

public void tamilNadu()

{

HeiraOne tm = new HeiraOne();

tm.setName("Tamil Nadu");

tm.setNofDist(23);

System.***out***.println(tm.getName()+"has total no of districts"+tm.getNofDist()+"pedant cm is"+Tn);

}

}

public class HeirMain

{

public static void main(String[] args)

{

Chennai ha1 = new Chennai();

Andhar a1 = new Andhar();

ha1.tamilNadu();

a1.andhraPradesh();

}

}

**4)Multiple Inheritance:**

interface IndiaCountry

{

void totalStates();

}

interface PrimeMinister

{

void prime();

}

public class MainClass implements IndiaCountry,PrimeMinister

{

public int total;

public String name;

public int getTotal()

{

return total;

}

public void setTotal(int total)

{

this.total = total;

}

public String getName()

{

return name;

}

public void setName(String name)

{

this.name = name;

}

public void totalStates()

{

MainClass mc = new MainClass();

mc.setName("india has total");

mc.setTotal(29);

System.***out***.println(mc.getName()+""+mc.getTotal()+"states");

}

public void prime()

{

MainClass mc = new MainClass();

mc.setName("Narendra Modi");

System.***out***.println(mc.getName());

}

}

public class AllMainClass {

public static void main(String[] args)

{

MainClass mc1 = new MainClass();

mc1.prime();

mc1.totalStates();

}

}

**2)Write a program on Access Modifier?**

**Types of Access Modifiers:**

1. Public (outside of class, and package)
2. Private (with in the class only)
3. Protected (outside of class but same package)
4. default

public class AcessModifiers

{

public static int *valOne*=20;

private String name="srikanth";

private int empid=12345;

protected static double *sal*=22.0;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getEmpid() {

return empid;

}

public void setEmpid(int empid) {

this.empid = empid;

}

}

public class ModifierMain extends AcessModifiers

{

int valTwo=30;

public static void main(String[] args)

{

final int valTwo = 20;

ModifierMain md = new ModifierMain();

System.***out***.println(md.getName());

md.setEmpid (78945);

System.***out***.println(md.getEmpid());

System.***out***.println("int value is "+*valOne*);

System.***out***.println("double value "+*sal*);

System.***out***.println("final key word "+valTwo);

}

}