

Program 1:

// program to demonstrate use of super keyword with constructors in multilevel inheritance.

```
package javaLab.javaPractical;
```

```
public class dog {  
    public static dog speak;  
    protected String name;  
    protected int age;  
  
    public dog(String name, int age){  
        this.name = name;  
        this.age = age;  
    }  
  
    public void speak(){  
        System.out.println("I am " + this.name + " and my age is " + this.age)  
    }  
};
```

```
public class cat extends dog{  
  
    private String food;  
  
    public cat(String name, int age, String food){  
        super(name, age);  
        this.food = food;  
    }  
  
    public cat(String name, int age){  
        super(name, age);  
        this.food = "Food";  
    }  
  
    public void speak(){  
        System.out.println("I am " + this.name + " and my age is " + this.age  
+ " and i eat this " + this.food);  
    }  
}
```

```

public class dogCatMain {
    public static void main(String[] args) {
        dog dog01= new dog("Dog_1", 3);
        dog01.speak();

        dog dog02= new dog("Dog_2", 5);
        dog02.speak();

        dog dog03= new dog("Dog_3", 1);
        dog03.speak();

        System.out.println("\nAfter Super Keyword this Cat class can also use
the features of Dog Class >> \n");

        cat cat001 = new cat("Cat_1", 2);
        cat001.speak();

        cat cat002 = new cat("Cat_2", 1);
        cat002.speak();

        cat cat003 = new cat("Cat_3", 2);
        cat003.speak();

        System.out.println("\nAfter Super Keyword this Cat class can also use
the features of Dog Class and also modify it >> \n");

        cat cat004 = new cat("Cat_4", 1, "Cat_Food");
        cat004.speak();
    }
}

```

Output:

```

PS C:\Users\ajeet\OneDrive\Documents\Java\Practice> & 'c:\Users\ajeet\.vscode\extensions\vscjava.vscode-java-debu
wp=transport=dt_socket,server=n,suspend=y,address=localhost:59042' '--enable-preview' '-XX:+ShowCodeDetailsInExcep
aceStorage\6c3ba9f61564fc5d8ca28ac91c943588\redhat.java\jdt_ws\Practice_8583d069\bin' 'javaLab.javaPractical.dogCa
I am Dog_1 and my age is 3
I am Dog_2 and my age is 5
I am Dog_3 and my age is 1

After Super Keyword this Cat class can also use the features of Dog Class >>

I am Cat_1 and my age is 2 and i eat this Food
I am Cat_2 and my age is 1 and i eat this Food
I am Cat_3 and my age is 2 and i eat this Food

After Super Keyword this Cat class can also use the features of Dog Class and also modify it >>

I am Cat_4 and my age is 1 and i eat this Cat_Food
PS C:\Users\ajeet\OneDrive\Documents\Java\Practice>

```

Program 2:

// Program to Handle Exception In a Super Class Methods

```
package javaLab.javaPractical;

public class superDogExH {
    void method() throws RuntimeException
    {
        System.out.println("\nSuperClass Dog\n");
    }
}

class subCatExH extends superDogExH {

    void method() throws ArithmeticException
    {
        System.out.println("\nSubClass Cat\n");
    }

    public static void main(String args[])
    {
        try{
            superDogExH s = new subCatExH();
            s.method();
        }
        catch(Exception e) {
            e.fillInStackTrace();
        }
    }
}
```

Output:

```
SubClass Cat
```