

PRACTICAL:17

AIM: Write a program in Java to demonstrate implementation of multiple inheritance using interfaces.

- **Multiple inheritance**

1. Multiple Inheritance is nothing but one class extending more than one class.
2. Multiple Inheritance is basically not directly supported by many Object Oriented Programming languages such as Java, Small Talk , C# etc..
3. As the Child class has to manage the dependency of more than one Parent class.
4. But you can achieve multiple inheritance in Java using **Interfaces**.

- **Interface**

1. An interface in java is a blueprint of a class. It has static constants and abstract methods.
2. The interface in Java is a mechanism used to achieve abstraction.
3. There can be only abstract methods in the Java interface, not method body.
4. It is used to achieve abstraction and multiple inheritance in Java.
5. Since java does not support multiple inheritance in case of class, but by using interface it can achieve multiple inheritance .

Declaration of Interface:

syntax:

```
interface <interface_name>
{
//Interface Body
}
```

Example:

interface printable //interface declaration

```
{
//Interface Body
}
```

class Sample implements printable // implement interface

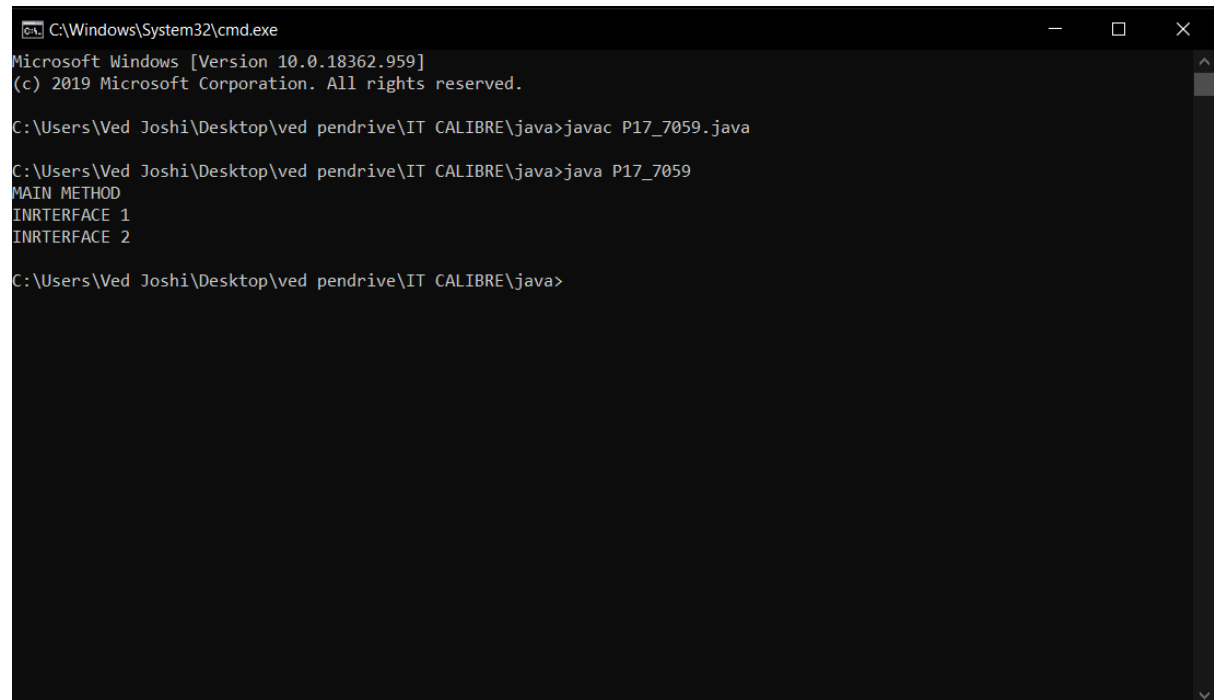
```
{
//Class Body
}
```

PROGRAM:

```
interface Multiple_inheritance
{
    void display();
}
interface Multiple_inheritance_1
{
    void display_1();
}
class Child implements Multiple_inheritance, Multiple_inheritance_1
{
    public void display()
    {
        System.out.println("INTERFACE 1");
    }
    public void display_1()
    {
        System.out.println("INTERFACE 2");
    }
}
class P17_7059
{
    public static void main(String args[])
    {
        System.out.println("MAIN METHOD");
        Child c1 = new Child();
        c1.display();
        c1.display_1();
    }
}
```

```
}
```

OUTPUT:



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18362.959]
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C:\Users\Ved Joshi\Desktop\ved pendrive\IT CALIBRE\java>javac P17_7059.java

C:\Users\Ved Joshi\Desktop\ved pendrive\IT CALIBRE\java>java P17_7059
MAIN METHOD
INRTERFACE 1
INRTERFACE 2

C:\Users\Ved Joshi\Desktop\ved pendrive\IT CALIBRE\java>
```