LAB 8: DEMONSTRATE USAGE OF KEYWORD SUPER AND FINAL

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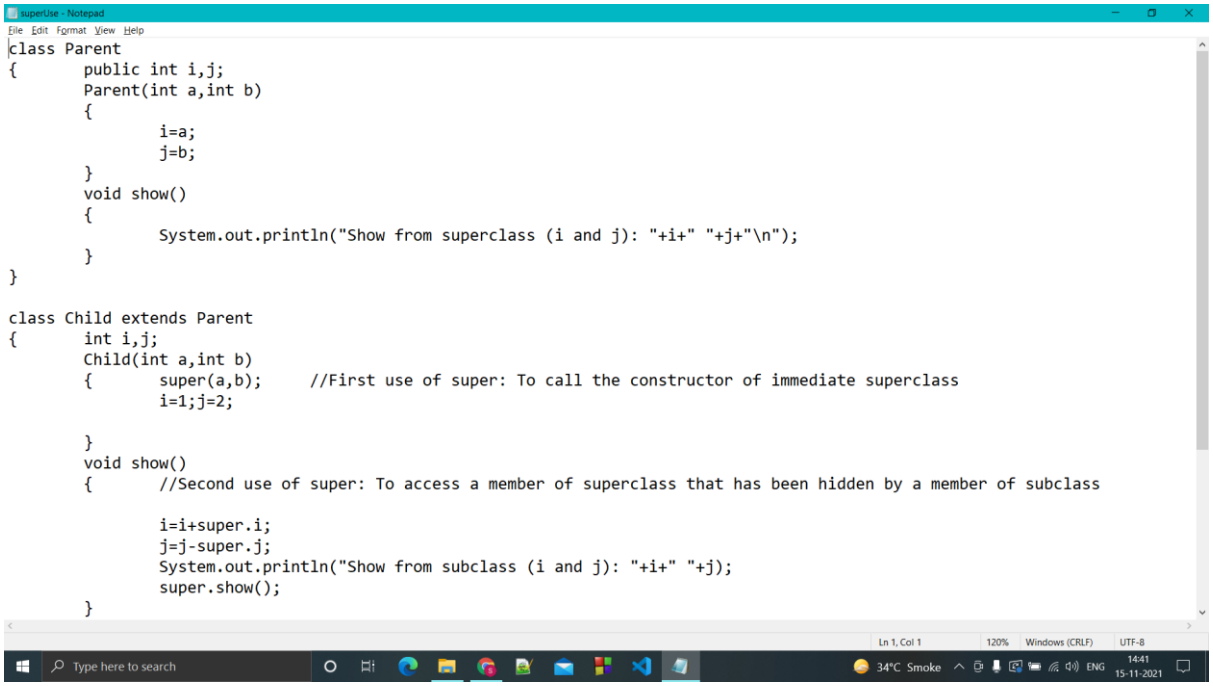
Q.1 Demonstrate any two uses of keyword super.

CODE:

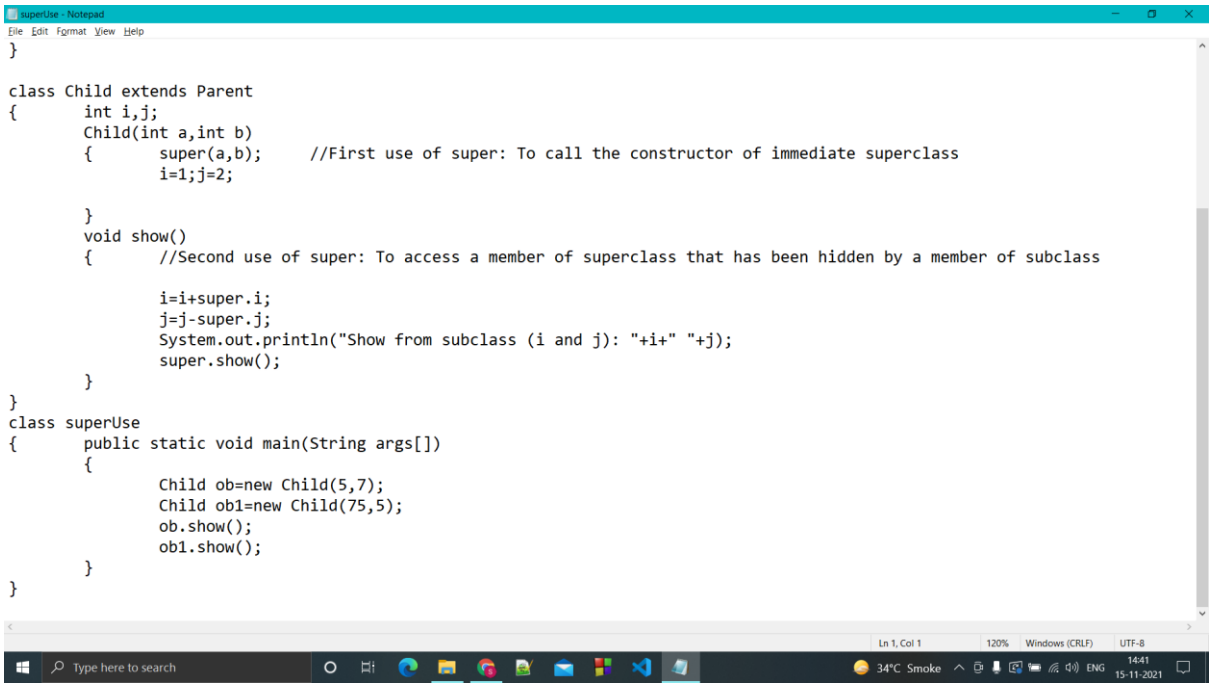


```
class Parent
{       public int i,j;
        Parent(int a,int b)
        {
                i=a;
                j=b;
        }
        void show()
        {
                System.out.println("Show from superclass (i and j): "+i+" "+j+"\n");
        }
}

class Child extends Parent
{       int i,j;
        Child(int a,int b)
        {       super(a,b);     //First use of super: To call the constructor of immediate superclass
                i=1;j=2;

        }
        void show()
        {       //Second use of super: To access a member of superclass that has been hidden by a member of subclass

                i=i+super.i;
                j=j-super.j;
                System.out.println("Show from subclass (i and j): "+i+" "+j);
                super.show();
        }
```



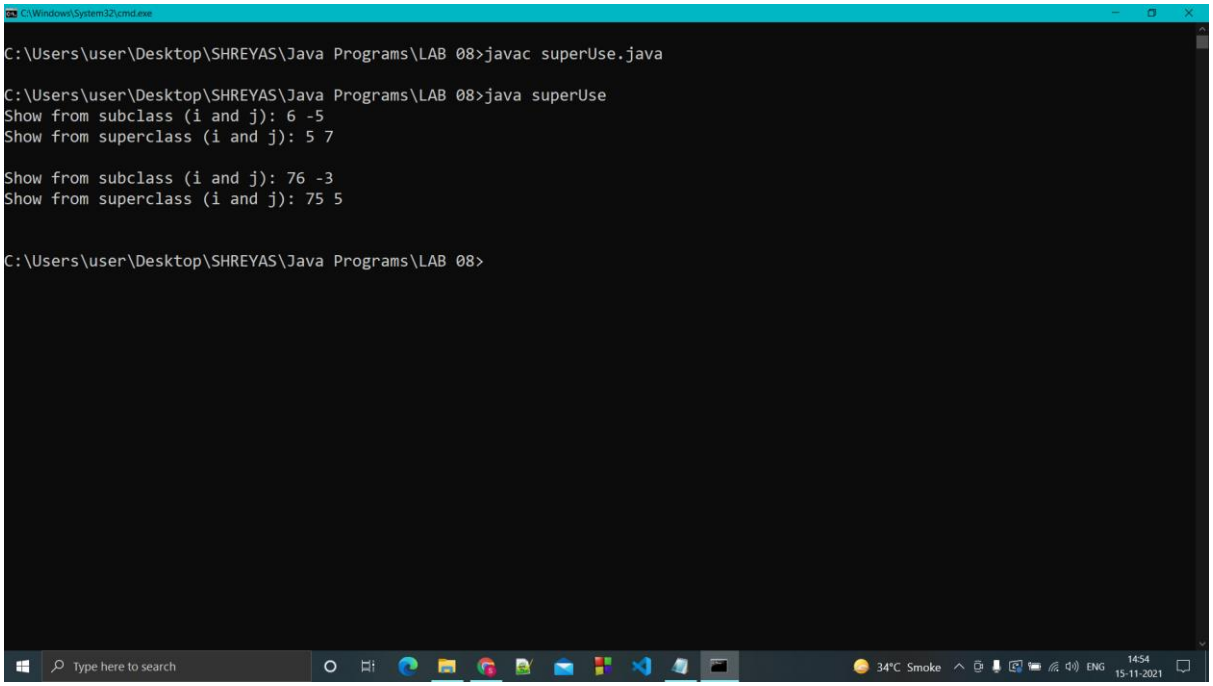
```
}

class Child extends Parent
{       int i,j;
        Child(int a,int b)
        {       super(a,b);     //First use of super: To call the constructor of immediate superclass
                i=1;j=2;

        }
        void show()
        {       //Second use of super: To access a member of superclass that has been hidden by a member of subclass

                i=i+super.i;
                j=j-super.j;
                System.out.println("Show from subclass (i and j): "+i+" "+j);
                super.show();
        }
}
class superUse
{       public static void main(String args[])
        {
                Child ob=new Child(5,7);
                Child ob1=new Child(75,5);
                ob.show();
                ob1.show();
        }
}
```

OUTPUT:


C:\Windows\System32\cmd.exe
C:\Users\user\Desktop\SHREYAS\Java Programs\LAB 08>javac superUse.java
C:\Users\user\Desktop\SHREYAS\Java Programs\LAB 08>java superUse
Show from subclass (i and j): 6 -5
Show from superclass (i and j): 5 7
Show from subclass (i and j): 76 -3
Show from superclass (i and j): 75 5
C:\Users\user\Desktop\SHREYAS\Java Programs\LAB 08>
Type here to search
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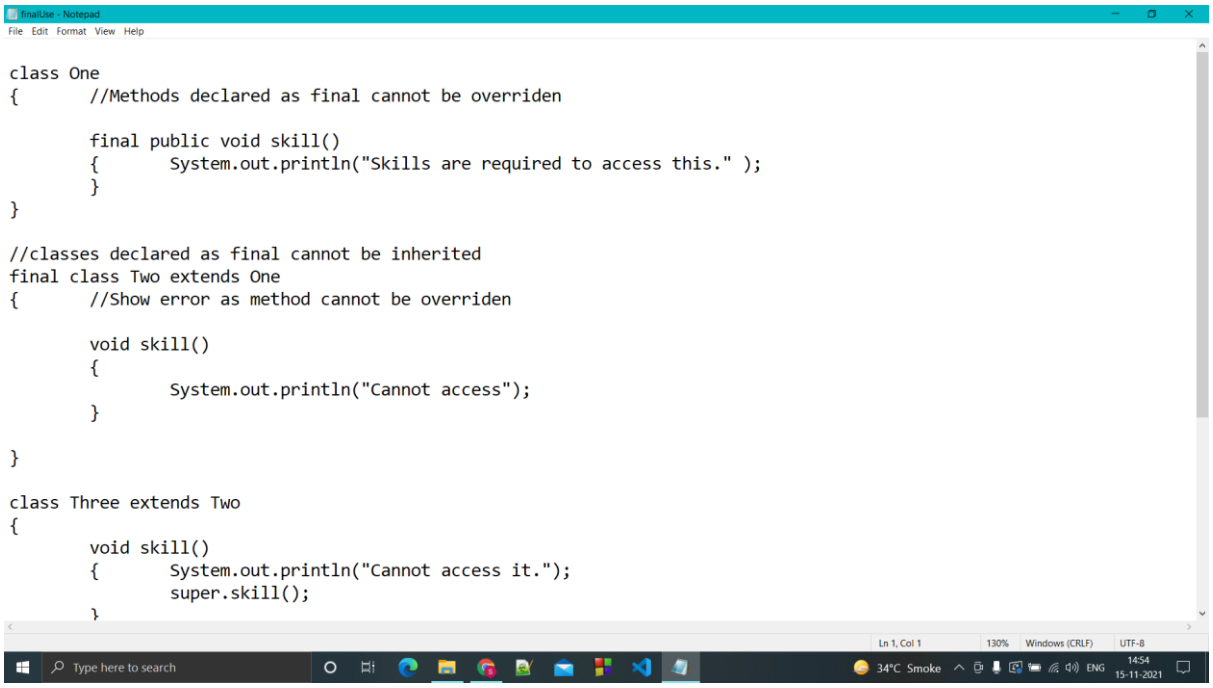
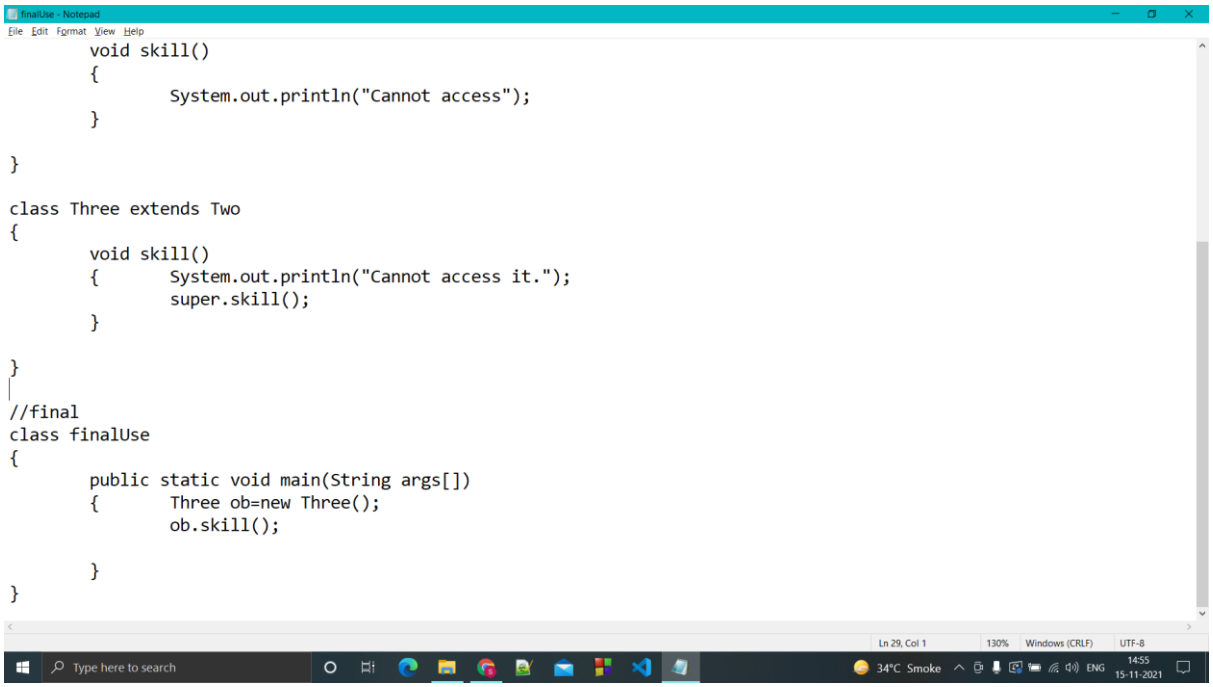
ENG
14:54
15-11-2021

Q.2 Demonstrate the importance of keyword final in inheritance and method overriding.

CODE:

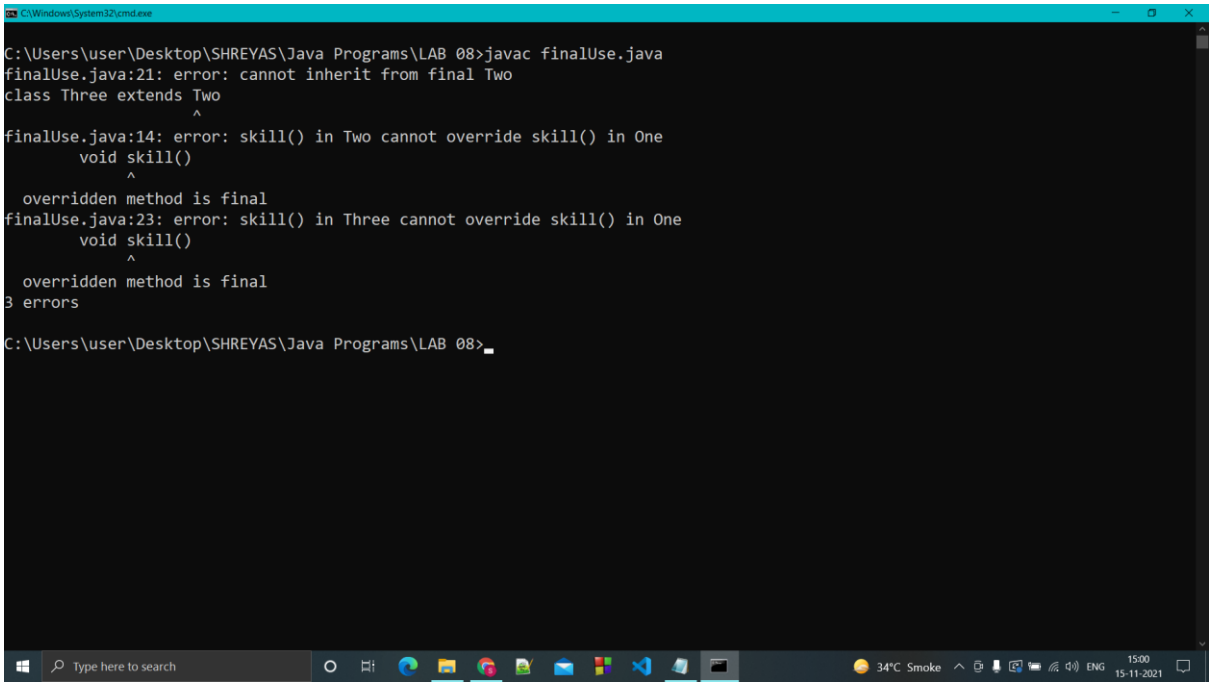


```
class One
{       //Methods declared as final cannot be overriden

        final public void skill()
        {       System.out.println("Skills are required to access this." );
        }
}

//classes declared as final cannot be inherited
final class Two extends One
{       //Show error as method cannot be overriden

        void skill()
        {
                System.out.println("Cannot access");
        }

}

class Three extends Two
{
        void skill()
        {       System.out.println("Cannot access it.");
                super.skill();
        }
```



```
        void skill()
        {
                System.out.println("Cannot access");
        }

}

class Three extends Two
{
        void skill()
        {       System.out.println("Cannot access it.");
                super.skill();
        }

}

//final
class finalUse
{
        public static void main(String args[])
        {       Three ob=new Three();
                ob.skill();

        }
}
```

OUTPUT


C:\Windows\System32\cmd.exe
C:\Users\user\Desktop\SHREYAS\Java Programs\LAB 08>javac finalUse.java
finalUse.java:21: error: cannot inherit from final Two
class Three extends Two
^
finalUse.java:14: error: skill() in Two cannot override skill() in One
void skill()
^
overridden method is final
finalUse.java:23: error: skill() in Three cannot override skill() in One
void skill()
^
overridden method is final
3 errors
C:\Users\user\Desktop\SHREYAS\Java Programs\LAB 08>
Type here to search
34°C Smoke
ENG
15:00
15-11-2021