```java
//Example for abstract keyword

/*
The abstract keyword is a non-access modifier, used for classes and
methods. It is used to achieve abstraction which is one of the pillar
of Object Oriented Programming(OOP).
 */

abstract class Parent
{
/*
An abstract class is a restricted class that cannot be used to create
objects (to access it, it must be inherited from another class).
 */

   static void disp()
   {
      System.out.println("Hello");
   }
   /*
   abstract class may have Static Methods. The reason for this is Static
   methods do not work on the instance of the class, they are directly
   associated with the class itself.
    */

   abstract void temp();
   /*
   An abstract method can only be used in an abstract class, and it does
   not have a body. The body is provided by the subclass (inherited
   from).
    */
}
class Child extends Parent
{
/*
Child class may contain its own members but it must have the definition
of Parent class' abstract methods, as it is the subclass of 'Parent'
super class.
 */
   void sum()
   {
      System.out.println("Hi");
   }
   /*
```

```
45      If you don't define abstract temp() in child class you will get an error:
46      Class 'Child' must either be declared abstract or implement abstract
47      method 'temp()' in 'Parent'
48       */
49      void temp()
50      {
51          System.out.println("Welcome");
52      }
53  }
54  public class Main {
55
56      public static void main(String[] args) {
57          //Parent objP=new Parent(); will raise an error
58          //'Parent' is abstract; cannot be instantiated
59
60          Parent refP;
61          /*
62          abstract class can't be instantiated but you may create its reference
63           */
64
65          Child objC=new Child();
66          objC.sum();
67          objC.temp();
68
69          Parent.disp();
70          //static method disp() calling from abstract class Parent.
71      }
72  }
73  /*
74  A class which is declared with the abstract keyword is known as an
75  abstract class in Java. It can have abstract and non-abstract
76  methods (method with the body).
77
78  Ways to achieve Abstraction:
79  There are two ways to achieve abstraction in java:
80  Abstract class (0 to 100%)
81  Interface (100%)
82
83  A method which is declared as abstract and does not have
84  implementation is known as an abstract method.
85
86  An abstract class is a class that is declared abstract—it may or may
87  not include abstract methods. Abstract classes cannot be instantiated,
88  but they can be subclassed.
```

*If a class includes abstract methods, then the class itself must be declared abstract.*

*When an abstract class is subclassed, the subclass usually provides implementations for all of the abstract methods in its parent class. However, if it does not, then the subclass must also be declared abstract.*

*An abstract keyword cannot be used with variables and constructors.*
*If a method is abstract, it doesn't contain the body.*
*We cannot use the abstract keyword with the final.*
*We cannot declare abstract methods as private.*
*We cannot declare abstract methods as static.*
*An abstract method can't be synchronized.*
*/