Java Concept 67

Methods	Can be	Can Not be
abstract methods	---	final
non abstract methods	final	---

```
1 abstract class Calculate
2 {
3  //abstract method
4  abstract int sum(int a, int b);
5  //non - abstract method
6  int add(int a, int b){ return (a+b);}
7 }
```

```
1  //Making abstract and non abstract method non final
2  // No Run Error // No Compile error
3  abstract class Calculate
4  {
5     abstract int sum(int a ,int b);
6     int add(int a, int b){return (a+b);}
7  }
8  class JavaConcept
9  {
10   public static void main(String[] args)
11     {
12
13     }
14 }
```

```
run:
BUILD SUCCESSFUL (total time: 0 seconds)
```

```
1  //Making abstract and non abstract method final
2  // No Run Error // Gives Compile Error
3  abstract class Calculate
4  {
5    final abstract int sum(int a ,int b); //Error
6    final int add(int a, int b){return (a+b);}  // No Error
7  }
8  class JavaConcept
9  {
10   public static void main(String[] args)
11     {
12
13     }
14 }
```

```
Error - error: illegal combination of modifiers: abstract and final
final abstract int sum(int a ,int b);
```

```java
//Making abstract and non abstract method final
//overriding abstract method
// No Run Error // Gives Compile Error
abstract class Calculate
{
  final abstract int sum(int a ,int b); //Error
  final int add(int a, int b){return (a+b);}  // No Error
}
class JavaConcept extends Calculate
{
  final int sum(int a ,int b){return a+b;};
  public static void main(String[] args)
    {
     JavaConcept obj = new JavaConcept();
     System.out.println(obj.sum(10,10));
    }
}
```

```
run:
20
BUILD SUCCESSFUL (total time: 1 second)
```

Error-

1. error: illegal combination of modifiers: abstract and final , final abstract int sum(int a ,int b); //Error
2. error: sum(int,int) in JavaConcept cannot override sum(int,int) in Calculate, final int sum(int a ,int b){return a+b;}; //Error