

OOAD HW2

1.) "clone()" method is protected, so as long as you do not define it under singleton class no problem for cloning. It is throwing an error.

```
java: clone() has protected access in java.lang.Object
```

2.) As I described above pure singleton design is not cloneable.

Let's assume the class Singleton is a subclass of class Parent, that fully implements the Cloneable interface:

1.2) In that case someone can broket he main principle of singleton. But to prevent that, you can override "clone" method and throw an "CloneNotSupportedException" exception. By that way, if someone tries to call "clone()" method they get an error if they do not handle exception. Here is direct reference from javadoc:

```
public class CloneNotSupportedException  
extends Exception
```

Thrown to indicate that the clone method in class Object has been called to clone an object, but that the object's class does not implement the Cloneable interface.

Applications that override the clone method can also throw this exception to indicate that an object could not or should not be cloned.