**Proxy Design Pattern**

Proxy design pattern intent according to GoF is:

**Provide a surrogate or placeholder for another object to control access to it.**

The definition itself is very clear and proxy design pattern is used when we want to provide controlled access of a functionality.

Let’s say we have a class that can run some command on the system. Now if we are using it, its fine but if we want to give this program to a client application, it can have severe issues because client program can issue command to delete some system files or change some settings that you don’t want.

Here a proxy class can be created to provide controlled access of the program.

### Proxy Design Pattern – Proxy Class

Now we want to provide only admin users to have full access of above class, if the user is not admin then only limited commands will be allowed. Here is our very simple proxy class implementation.

Proxy design pattern common uses are to control access or to provide a wrapper implementation for better performance.

JDK example: Java RMI package uses proxy pattern.