

## ***Advanced Object-Oriented Design Principles & Patterns (2020) ASSESSMENT I***

For this Assessment the requirement was to redesign and refactor classes to provide maximum reusability, extensibility and eliminate as many dependencies as possible in the class Alpha.

So, from my first viewing of the UML diagram that was provided I had made some observations. In my opinion Delta, Epsilon and Zeta were doing the same thing as they were all taking in a String and then returning an int so I decided that I would put these into a package called `ie.gmit.sw.high_status` along with a class called Theta. In the Theta class there is a switch statement which will return the day of the week while Delta, Epsilon and Zeta all return integers

I then decided to put Gamma and Beta in the same package called `ie.gmit.sw.low_status` and added in a class called Eta which will return Beta, Gamma or Null depending on the if statement while Gamma and Beta both return Strings. By creating these two packages the idea was eliminate as many dependencies as possible.

By creating these 2 packages I was left with Alpha and Status, so I decided to put them in a package called `ie.gmit.sw`. In the Alpha class I imported both Eta and Theta and made two variables. I then put them in a class which has an if statement which can return either eta or theta. This is my UML diagram which is below which shows the suite of classes in my application.

