

# Francois Smith

u21649988

## Task 1:

1.3 Template Design Pattern

## Task 2:

- 2.6 Creational – EnemyFactories, the oversee instantiating objects from a specific source instead of directly from the object class. The method which provides this is the createEnemy method.  
Structural – No structural implementations in our Design Patterns Used.  
Behavioral – Enemies, the base enemy class defers some functionality to be implemented in sub enemy classes this is an example of the template method, and can be seen in the celebrate, die etc. methods.
- 2.7 There is 1 product per factory, so it is a 1 to 1 relationship, making it the standard Factory Method.

## Task 4:

- 4.2 I used memento to save and store both the enemy currently active as well as the state of all current squad members. It saves before every fight to allow you to rerun the fight once you die to try your luck in beating a new randomized enemy after you died. It fits in to GoF by allowing you to save the state of your squad and reroll a new enemy at a later stage if you failed against one.