Cesar A. Santiago

ID: 970403634

COP3022 Intermediate Computer Programming

Pf. A. Pinto

**Lab\_1**:

Three approaches to Software Development; Waterfall Model, Spiral Model, and Agile Development Model. These Three models help us map progress towards a defined goal throughout the development of software. All models have different steps but have similarities between them. The Waterfall model is a list of steps a developer must go through to successfully go through the life cycle of a piece of software. The Spiral Model uses an iterative design to structure the list of steps, the developer following this design must go through different cycles to achieve a successfully launched piece of software. The Spiral Model has certain thresh holds to achieve a round of a cycle, which include level of effort and degree of details depending on the requirements of this iteration. The Agile Development Model is more like a set of principles a software engineer must stick to to have a successful launch of software. The overall mantra of this type of development is that the user experience must come above the engineer’s expense. This allows the engineers to concentrate on the software’s usability, while being able to change the design to best fit the requirements on the fly. The fact that the software engineer must follow the requirements and design with them in mind at all times is what all of the Models have in common.

UML Design:

A UML class diagram is comprised of three relationships that link classes together: Association, Aggregation, and Generalization. Association describes the relationship between instances of two classes, there is an association if one instance of a class requires reference to the other to produce a certain type of work. Aggregation is an association in which one class belongs to a collection. Such as an object utilized as an array to list data inside another object. Generalization is a link in which one class is a superclass of another.

