**Assignment 1**

**What is UML:**

UML is a language that was created in order to unify the way that software documentation was created. It allowed users to create easy to read diagrams that described various things such as interfaces, ports, classes, variable types and many more.

UML is designed to allow teams to create specific technical diagrams that are universal and standard so that teams can easily read each other’s plans without needing to much clarification. Users are able to create plans dedicated to the different states of application development, they are able to also dive into more specific plans such as event management, as well as being able to do various acts of planning and analysis before starting the project. By adding such detail to the plan, this will reduce issues in the technical development of the software such as missing components and features.

UML was first scoped to be use in software related services, however, over the years at is has been developed its scope has broadened and is now also able to be used in business modelling as well.

**Why should a developer use UML:**

Developers should use UML as it allows them to convey a project using a diagram that follows a set of rules to stop users from miscommunication. This in turn lowers the chance of bugs and issues as all users are aware of what is required in the project. UML also has rules in place to allow for specific technical breakdowns such as variable types, state breakdowns and how ports and interfaces work. Due to the complexity of projects, having a set of rules to follow can cut back on human error.

**What is the rational unified process (RUP):**

The rational unified process is a software development process for object oriented design. It can also be described as the Unified Process Model.

The 5 phases of the rational unified process are as follows:

1. **Inception:**
   1. There are 2 main processes inside the inception phase and they are the communication and the planning processes.
   2. It identifies the scope of the project and allows for management to work out the cost and time required for the project to be completed. To do this, it uses a use-case model.
2. **Elaboration:**
   1. There are 2 main process inside the elaboration phase and they are the planning and modelling processes.
   2. They will carry out a detailed evaluation and development plan to work out and iron out any risks that may arise.
3. **Construction:**
   1. The project is developed and completed.
   2. Tests are developed and the source code is written.
   3. The developers start programming the system/application.
4. **Transition:**
   1. The project is released to the public.
   2. Update the project documentation.
   3. Beta testing phase begins.
   4. Bugs/Issues are removed from the project based on the client feedback.
5. **Production:**
   1. The final phase of the model.
   2. The project is updated and maintenance is regularly carried out.

**The purpose of the OMG:**

OMG, other wise known as the Object Management Group are a group that are dedicated to providing a standard architecture for distributed network objects. The Object Management Group provide a “portable and interoperable object model that functions across multiple platforms.”.