

## **Learning Outcomes:**

### Enabling knowledge and skills:

- Database construction and interaction
- PHP and JavaScript scripting languages
- Java language
- Project management principles.

### Introduction:

The ATAR Calculator project implemented the RUP methodology for planning and execution of project objectives and tasks, utilizing this methodology we have broken down and executed the project into four main phases, being, inception, elaboration, construction and transition.

We chose to implement the population of the 'courses' database table using the JAVA language. Java provides simple and easy to use libraries for database communication.

Maintenance is an important part of the project and as such the project team felt it was important to create a solution wherein all components were created in a form that are accessible and non-verbose.

The webpage interface utilizes both JavaScript and PHP to provide an efficient means of communication between server and clients.

### Problem Solving:

The first issue that arose was the availability of course data in a form that could be utilized by our web interface. Being that we were unable to find a public database that provided this information, the project team implemented a java program which extracted the necessary data from the VTAC website, utilizing pattern identification to navigate through pages.

The webpage was written in PHP, and contains JavaScript for the calculation of raw high school and VCE scores to an ATAR.

New technologies were learned for this project: AJAX and JSON.

### Communication:

Each week, the project team would hold two meetings, one via skype, and one in person with supervisors.

During the skype meetings the project team would work together to find solutions to the problems each of us were working on.

During the meetings with supervisors we would discuss and reflect on the current progress of the project, as well as any changes to requirements, and possible issues.

### Teamwork:

Each member in the team took on multi-disciplined roles, that is, the project team were unsure of the actual complexity and involvement required for a single task to be achieved and therefore decided that the project team should in its entirety be available to help with any facet of the project.

### Responsibility:

Given the nature of the project, there were very few legal or ethical issues encountered during the project. The only major issues considered was the security of client server communications and the collection of user data.