Quality plan

Documents and plans:

Documents will be written in Microsoft Word, or a program that is compatible with Word. All written documents will have Calibri as its main font (due to its widespread accessibility from different computers) with a font size of 11. Main headings (the title of the document) will be bold and have a font size of 17, and subheadings will have a size of 14. Line spacing will be set to the (Microsoft Word) default of 1.5. Colours of the fonts will remain the default of black.

Headings will be used every time a new subject is introduced, and the content will be split into paragraphs.

GANTT charts will be made using excel and different colours will represent different members assigned to the tasks. (Green = Max, Pink = Latifah, Blue = Sam, Purple = Bram).

Code formatting:

All classes, methods and variables will have meaningful names; method and variable names will be written in camel case (i.e getData instead of get_data), and class names will begin with a capital letter. Interfaces may be used when it is anticipated that a method will need to be implemented more than once.

At the top of every class, a comment will be present stating the author(s) of the code and a short description of the class's function. Each method will also have a comment directly above it to explain its functionality. Both single line and block comments are allowed.

Global variables will be nearer the top of the class, followed by constructors, and then methods. Blocks of code (following the header of a constructor or method) will be indented with four spaces (IntelliJ's auto layout will do that automatically).

Software:

For uploading and synchronising files, we will be using Gitlab. TortoiseGit will be used to assist our interaction with Gitlab, and to remove the need to state which files to track manually.

For development, the agreed software to use will be IntelliJ, and files will be uploaded to Gitlab via the IDE. We will develop the UML diagrams using Papyrus (an extension of Eclipse). We will not be importing UML between the IDEs so there will be no issues with compatibility.

The Microsoft Word and Excel packages will be used to edit documents and the Gantt Chart. We will all make sure that we have the most recent version of our software that we can get.

Methodologies:

The group will follow agile: extreme programming principles which are laid out as follows.

Incremental development: Code will created function at a time to meet the customer's requirements and then be added onto with additional functionality. This way a useable product will be created sooner.

Change through frequent system releases: The updates will be small but frequent, thus encouraging code refactoring and helping us keep the project simple.

Full time customer involvement: The customer will be conferenced frequently and shown the latest iteration in order to guarantee they are getting the product they want and to allow us to accommodate for changes.

Pair programming: programmers work in pairs and pairs change over time. This will help spread common knowledge of code across the team and encourages refactoring.

Refactoring: changes cannot be anticipated so constant code refactoring is required to make it simple to adapt as the requirements change.

Test first development: tests should be planned out before the code is written, writing tests as programs to be executed e.g. through Junit; this way all previous tests can be run when new functionality is added. After any new work is committed it must pass existing tests.

Agreement

The group will agree on the quality of practices and completed work at weekly reviews the existing design paradigm will be checked and updated to make sure all the colleagues agree on the principles.