# Final Presentation Notes

## Introduction

Good Morning/Afternoon, I am Victor Soudien and this is Zahraa Mathews. For our honours project this year, our task was to implement an electronic marking system. This involved creating a web and tablet interface for marking tests as well as a web interface to view analysis of the marks. However, what we ended up with was a far more comprehensive test management solution. Just to clarify, a test management solution addresses all tasks involved with the collection of scripts, distribution to tutors, capturing of marks and redistribution to students. Why name?

Our research questions were the following:

* Does a system which combines technology and human marking increase marking speed?
* Is a tablet and stylus interface considered intuitive by markers?
* Does the system reduce the overall time to complete the marking process?
* Does the system design, make marking with a mouse intuitive?
* Do users prefer the web or tablet interface?

Do we want to print anything for the audience? Perhaps our process diagram numbered and then our “slides” have the same numbers.

### Development Methodology

One of the biggest goals of our system was to minimize the changes that would need to be made to the current procedures should our system be adopted. To accomplish this, we wanted to work closely with the tutors involved in the current process and integrate their feedback into the final system. The choice to involve users in both the design and implementation stages of the project led us to follow the agile methodology.

Our project lifecycle consisted of four iterations with user testing sessions conducted at the end of each of the first three. The user testing simply involved tutors marking scripts using the web and tablet interface as well as marking a script manually and providing feedback through a questionnaire handed out at the end.

### Current Process

During the design phase we analysed the current process to determine how we could improve it. We made the decision early on that we would not aim for a fully automated system. This is because we discovered during our literature review, that fully automated systems restrict the users in terms of what kind of questions they can answer.

Our first decision towards accomplishing this was to not implement a fully automated system as this has been shown to restrict users in terms of what kind of tests they can set. What we wanted to do was improve certain aspects of the current process. I am assuming most of you are familiar with current test management process so I am just going to give a brief overview. After the test has been written, the scripts are collected by the TA and distributed to the tutors for marking. Once the scripts are marked, they are returned to the TA who captures the marks on Vula and then notifies students that their scripts are ready for collection from a specific location.

The first thing we realised about this process is that only the students’ overall mark for the test is captured. We wanted to improve this by capturing marks on a sub-question level and associating each main question, with a level within Bloom’s taxonomy. This allows for better analysis of the performance of a specific student and the entire class. For those who are not aware, Bloom’s taxonomy allows for categorisation of questions based on their cognitive complexity.



From experience, we noted that test scripts are often lost by students after collection or they are stolen by others. We realised that our system would have a digital version of the test scripts and we could use this to improve the redistribution of scripts. We thus decided that we would implement the emailing of marked scripts to students as well as a summary of their marks for the test.

In order to acquire a digital version of the tests, they would need to be scanned after collection. We anticipated that this may be a bottleneck in the process and decided to design it such that the user input is minimized. This meant that users should be able to scan multiple scripts at the same time, not need to enter any test information and that scripts should become available to markers as they are uploaded to the server.

Despite all these improvements which we wanted to implement, our core focus was still on the act of marking a test script. To improve this we wanted to reduce human error by automatically tallying marks, make the memorandum easier to use alongside the test and provide features which would allow scripts to be brought to the attention of a senior marker.

### Constraints

Of course by taking the approach of improving the current process instead of creating an entirely new one, certain constraints were introduced. Mention how these were handled?

* How tests are taken should not be changed e.g. move to an electronic system.
* The system should be able to handle the test script in its current format with minimum changes, if any.
* The memorandum should not have to be manually entered into the system but instead it should be able to work with the current memorandum format.
* Overview of our process 🡨 Start with this next
* Mention constraints