# General Description

This section gives an overall general description of the system to be developed based on the client’s explanation and description of the system.

## User Problem Statement

The user problem is the current mark-recording system being used within the Department of Science and other departments at the University of Pretoria. The current system heavily involves the module lecturer, and the client requires that a digital solution be made to reduce and if possible eliminate the lecturers’ involvement in the mark-recording process.

The current mark-recording system involves the following process:

* For practical sessions in the informatorium;
  + Students complete their practical assignments and bring them to their booked practical sessions.
  + The marker (TA or tutor) then traverses through all the students, assessing their practical assignments and awarding marks by recording these marks on a piece of paper populated with a rubric for the particular practical assignment and all the students who are supposed to be in that practical session.
  + After the practical, the tutor then hands the mark-sheet to the module lecturer who then records the marks onto the master mark document.
* For written and other assessments not assessed in the informatorium;
  + Students submit their work either by uploading the work onto the Computer Science website, or by handing in a hard copy of their work to the lecturer or TA or tutor.
  + The TAs and tutors then grade the assessments and then record the marks onto a mark sheet, which they then give to the lecturer who then records the marks onto the master mark document.

It is clear from the above processes how tedious and lengthy the process of assessing and recording marks onto a master mark document can be, hence the request for a more effective and efficient digital solution which will eliminate most of the sundry steps and internal processes required to record and document students’ marks, which will essentially reduce the involvement of the lecturer in the mark recording process.

## User Characteristics

This system will be used by the following users:

* HOD - The Head of Department for which ever department that is

using the system.

* Lecturers - The module lecturers responsible for a module with

assessments graded using this system.

* Teaching Assistants - The individuals assigned by lecturers responsible for

grading and recording students’ assessment mark.

* Tutors - The individuals assigned by lecturers responsible for

grading and recording students’ assessment mark.

* Students - Students registered for modules using this marking system.

## User Objectives

Each user of the system is meant to use the system to accomplish the following objectives:

* HOD
  + To administer and review the system.
  + To assign lecturer’s to their respective modules on the system.
  + To view student marks.
* Lecturers
  + To assign markers to marking sessions and assign students to markers (i.e. practical sessions and other sessions where students’ assessments are graded).
  + To lock and finalize mark sheets for marking-session once the marking session are complete.
  + To review relevant audit logs.
  + To view student marks.
  + To grade and record students’ marks onto the system when required.
  + To alter students’ marks on the system if necessary when required.
* Teaching Assistants
  + To grade and record students’ marks onto the system.
  + To alter students’ marks on the system if necessary.
* Tutors
  + To grade and record students’ marks onto the system.
* Students
  + To view their marks for assessments already graded.

## Constraints

Each user of the system is restricted in the following manner:

* HOD - May only administer the system by reviewing and not

editing relevant audit logs.

- Restricted from doing anything else not mentioned in the user objectives for the HOD.

* Lecturers - May only view and not edit relevant audit logs.

- Restricted from doing anything else not mentioned in the user objectives for the lecturer.

* Teaching Assistants - Should provide reason if altering a student’s marks.

- Should only have access to mark sheets for practicals, assessments and students they are assigned to.

- Restricted from doing anything else not mentioned in the user objectives for the teaching assistants.

* Tutors - Should provide reason if altering a student’s marks.

- Should only have access to mark sheets for practicals, assessments and students they are assigned to.

- Restricted from doing anything else not mentioned in the user objectives for the teaching assistants.

* Students - Restricted from doing anything else not mentioned in the user objectives of the student.

### Developmental and technological constraints

In developing this system, the following developmental and technological constraints must be noted as requested by the client:

* System should have web-interface.
* System should have mobile-interface, android interface in particular.
* System should interface with LDAP.
* System should run with Django.
* System should make use of SOAP-Interface.

### General Constraints

All users of the system are restricted from doing the following:

* Edit any audit log on the system.

## Assumptions and Dependencies

This section outlines the assumptions and dependencies made regarding the system.

### Assumptions

Assumptions regarding users:

* All users of the system are technology friendly and can easily use the system for its purpose.

Assumptions regarding use-environment:

* This system assumes that markers (TAs and tutors) will either have a web-enabled mobile phone or a computer with internet access in the venue where they will be recording the marks.
* This system assumes the venue or environment where markers (TAs and tutors) are using this system has second or third-generation network coverage.

### Dependencies

This section outlines the dependencies which the system relies on in order to function effectively and efficiently.

The following are deemed as dependencies:

* Markers (TAs or tutors) will have the necessary technology in their marking venues to enable them to use the system.