COS 301 Project requirements

Description:

A system to allow lecturers, teaching assistants and students to view, manipulate and modify student marks on multiple platforms. Functions will be made available based on the level of user permissions assigned to the person. Note that students would be limited to viewing marks and generating a small amount of reports.

Implementation reasons:

* Ease access to information.
* Create an easy to comprehend, high level view of mark information.
* Reduce the risk of mark los or confusion.

Requirements for students:

* Log in (using LDAP)
* See a list of subjects that they are enrolled in.
* Per subject there must be
  + A short module description
  + A mark layout
  + Report generation tools
* Print all marks (export to PDF)

Requirements for teaching assistants:

* Log in (using LDAP)
* A default subject view with the option to change subjects (assuming the person tutors multiple subjects).
* Show a list of sessions the tutor is responsible for, with their venues and times , and therein be able to flag himself with problems he may be having to attend.
* A student list that can expand on touch and is fully searchable on first- and last names as well as student numbers.
* The student should be flag-able as late/absent/incomplete assignment/assignment not done/suspected of plagiarism.
* The tutor should be able to access the current, as well as previous practical sessions with access to the previous session marks to perform corrections if necessary.
* If a tutor modifies a mark, the modification should be supported by a reason to be entered into the audit log.

Requirements for lecturers:

* Log in (using LDAP)
* A view of all the courses he has interest in.
* Add/edit evaluation categories.
* Specify a mark roll-up for each category.
* Specify a mark roll-up for each specific assessment.
* Specify the amount of each specific assessment that will count towards a final mark.
* Be able to view/edit marks per student
* Marks must be exportable in CSV format on all levels. (i.e. any grouping of practicals / assignments / year marks must be export-able)
* Reporting - This should be a completely separate component. Able to easily plug in and out of the system. It should be able to return the following information:
  + Mean
  + Median
  + Standard deviation
  + Lower and upper quartiles
  + Normal distribution

Requirements for a system as a whole:

Audit log

* Only viewable by lecturers.
* Editable by no one.
* Holds the following:
  + Date/time stamp
  + Function executed
  + Optional description
* Monthly newsletters from the system to lecturers about important system related tasks that occurred that month like marks being updated. A lecturer should also be able to pull this letter on demand – maybe as a report.
* SOAP interface.
* Django used for server side implementation
* Security/Authentication should happen via LDAP
* The database is stored in a MySQL database.
* The system should be scalable and robust.
* All input should be sanitized.
* All text should be UTF-8 encoded.