

# **Software Requirements Specification**

## **Computer Science Marks System**

Version: 0.1

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*For:*

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# 1 UI Screen Designs and User Work-Flow Specification

This section will look at how the system will be used by the different users. Each functional requirement will be accompanied by the appropriate screen designs(The web and mobile user interfaces).

## 1.1 Log In

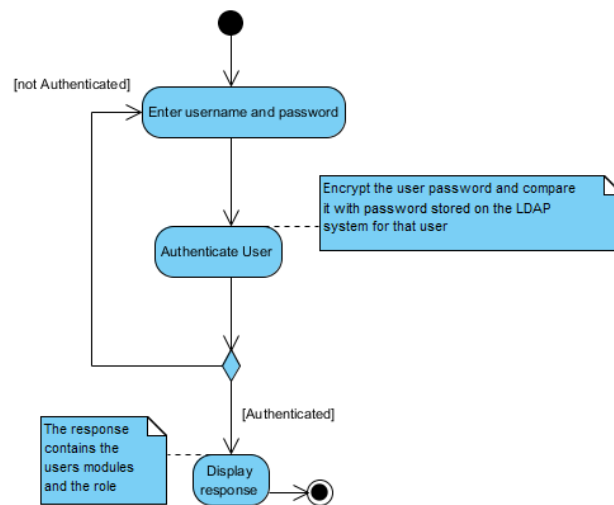
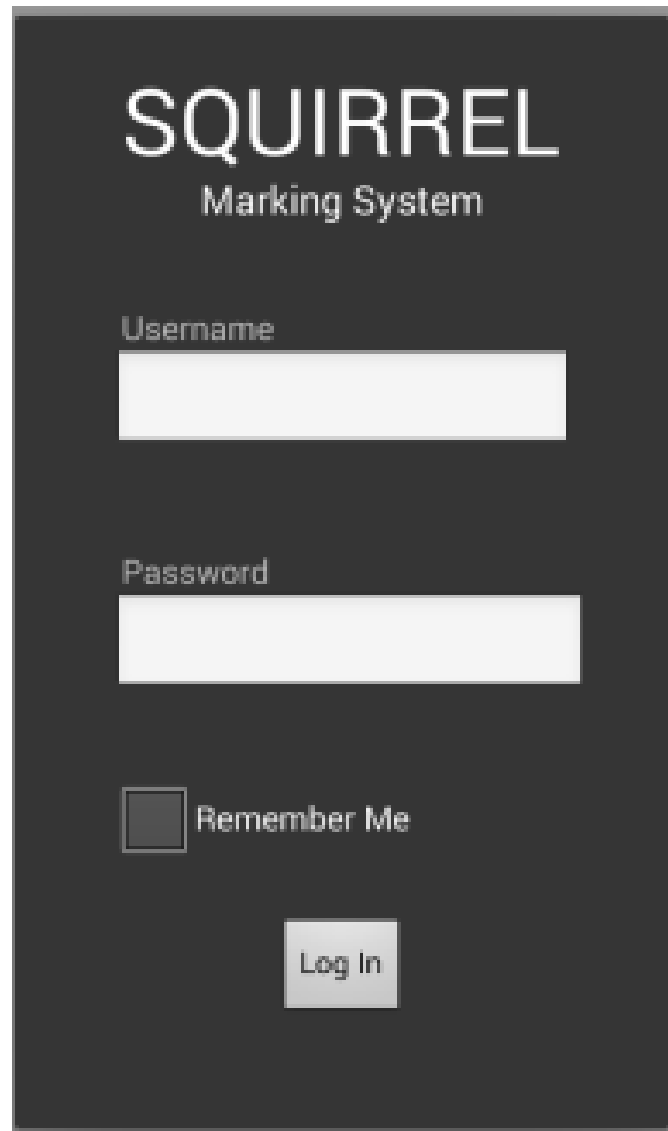


Figure 1: User log in activity diagram.

The activity diagram above is a abstract depiction of what will happen when a user logs into the system. After the user gets authenticated by the system, the authentication response object will contain the users information(the modules and roles) as shown in Figure 3 and 5.

### 1.1.1 Mobile Interface Screen Designs



The image shows a mobile login screen with a dark gray background. At the top, the word "SQUIRREL" is written in a large, white, serif font, with "Marking System" in a smaller, white, sans-serif font below it. Below the title, there are two white input fields. The first is labeled "Username" in a small, gray, sans-serif font. The second is labeled "Password" in the same font. Below the password field, there is a small, dark gray square checkbox followed by the text "Remember Me" in a small, gray, sans-serif font. At the bottom center, there is a white rectangular button with the text "Log In" in a small, gray, sans-serif font.

Figure 2: The mobile log in screen design.

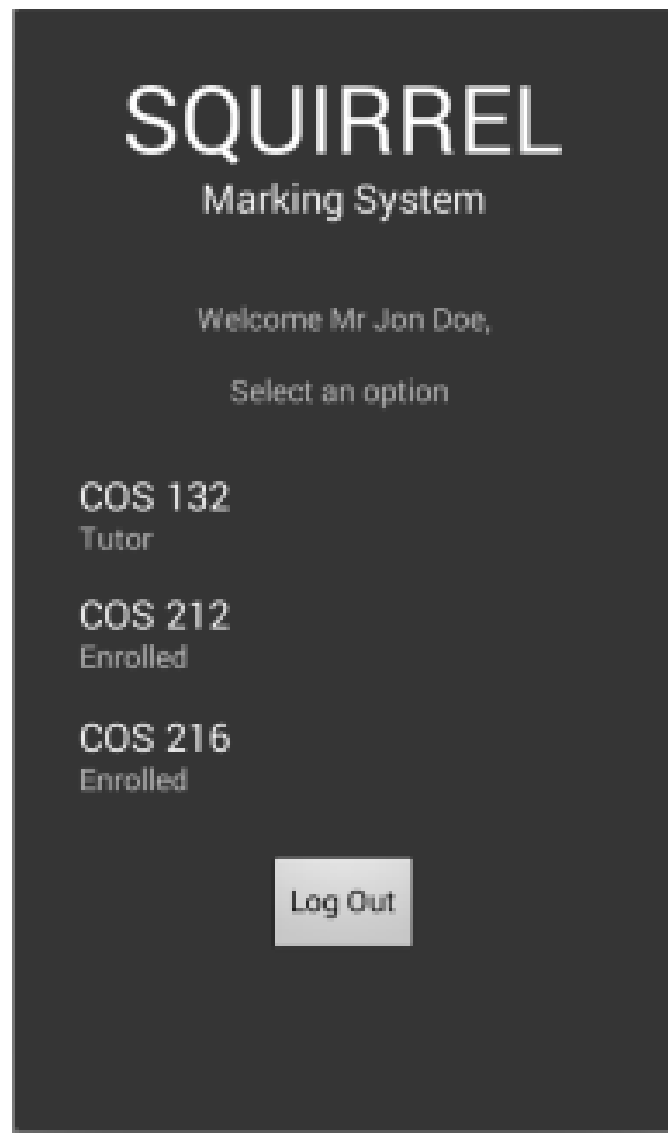


Figure 3: Screen design of a successfull log in request.

Figure 3 shows the modules the user is associated with and the roles users have for particular module.

### 1.1.2 Web Interface Screen Designs

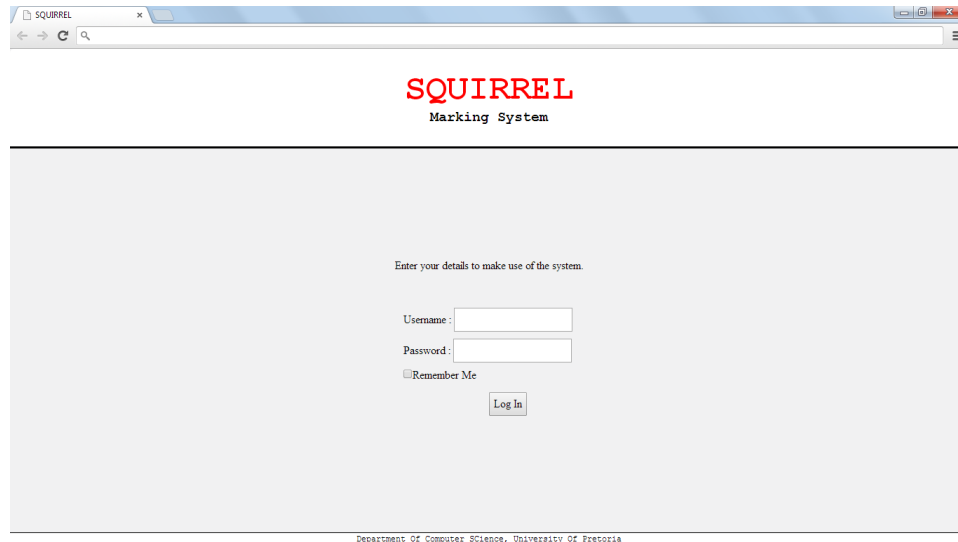


Figure 4: Screen design for web interface

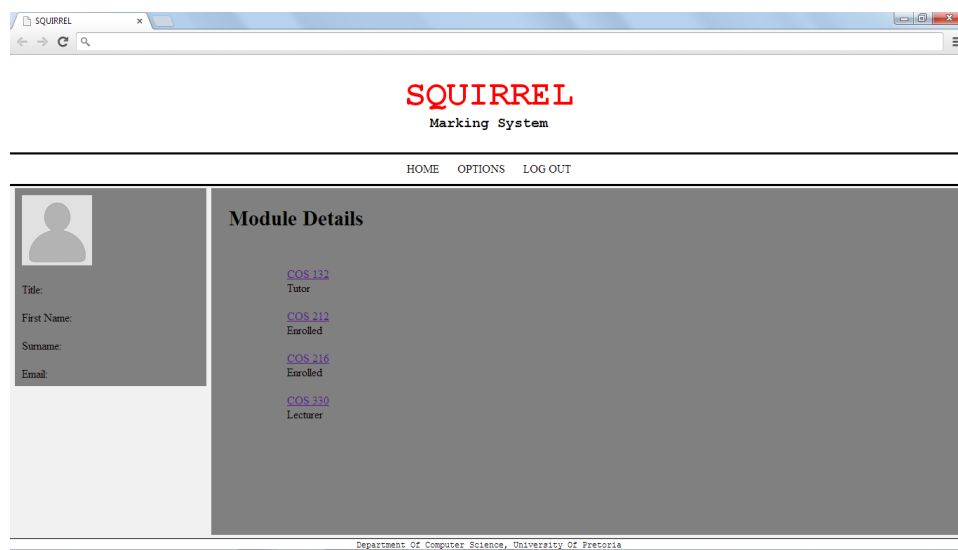


Figure 5: This is the welcome page the user sees after successfully being authenticated.

## 1.2 Assessment Creation

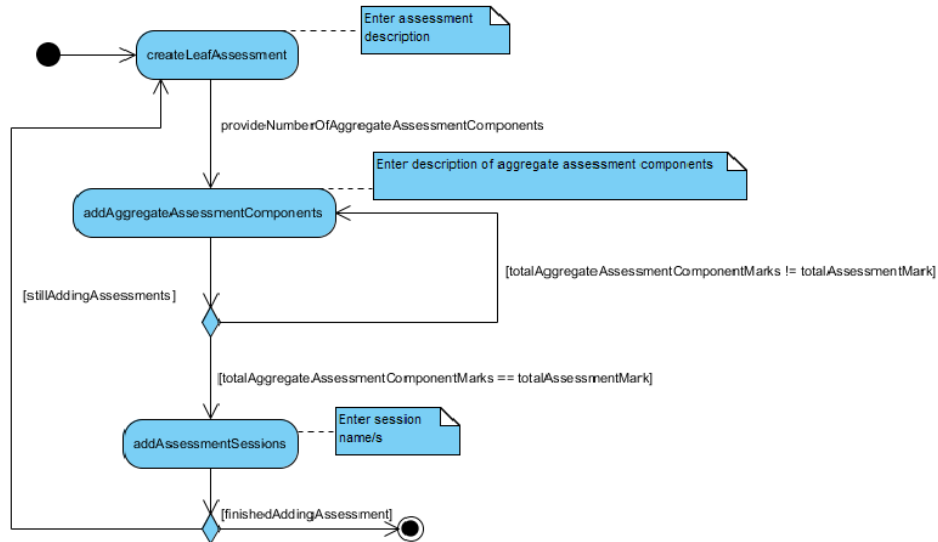


Figure 6: Activity diagram for creating atomic leaf assessments, aggregate assessments as well as sessions for the atomic assessments.

The assessment creation operation is only available to lecturers and only has the web interface as shown below.

### 1.2.1 Web Interface Screen Designs

The screenshot shows a web browser window with the address bar displaying 'SQUIRREL'. The page title is 'SQUIRREL Marking System'. The navigation bar includes links for 'HOME', 'OPTIONS', and 'LOG OUT'. The main content area is titled 'Assessment View:' and contains the following form elements:

- A sidebar on the left with a user profile icon and labels for 'Title:', 'First Name:', 'Surname:', and 'Email:'.
- A main form area with the following fields:
  - 'Assessment Name:' followed by a text input field.
  - 'Total Marks' followed by a text input field.
  - 'Select a module' followed by a dropdown menu.
  - 'Number Of Assessment Components:' followed by a dropdown menu showing '0'.
  - 'Number Of Assessment Sessions:' followed by a dropdown menu showing '0'.
  - A 'Next' button at the bottom.

The footer of the page reads 'Department Of Computer Science, University Of Pretoria'.

Figure 7: Screen design for creating an atomic assessment.

The screenshot shows a web browser window with the address bar displaying 'SQUIRREL'. The page title is 'SQUIRREL Marking System'. The navigation bar includes links for 'HOME', 'OPTIONS', and 'LOG OUT'. The main content area is titled 'Add Assessment Components:' and contains the following form elements:

- A sidebar on the left with a user profile icon and labels for 'Title:', 'First Name:', 'Surname:', and 'Email:'.
- A main form area with the following fields:
  - 'Select an assessment' followed by a dropdown menu.
  - 'Component Name:' followed by a dropdown menu showing 'Mark Allocation'.
  - 'Component Name:' followed by a dropdown menu showing 'Mark Allocation'.
  - 'Component Name:' followed by a dropdown menu showing 'Mark Allocation'.
  - A 'Next' button at the bottom.

The footer of the page reads 'Department Of Computer Science, University Of Pretoria'.

Figure 8: Screen design for adding aggregate assessments.



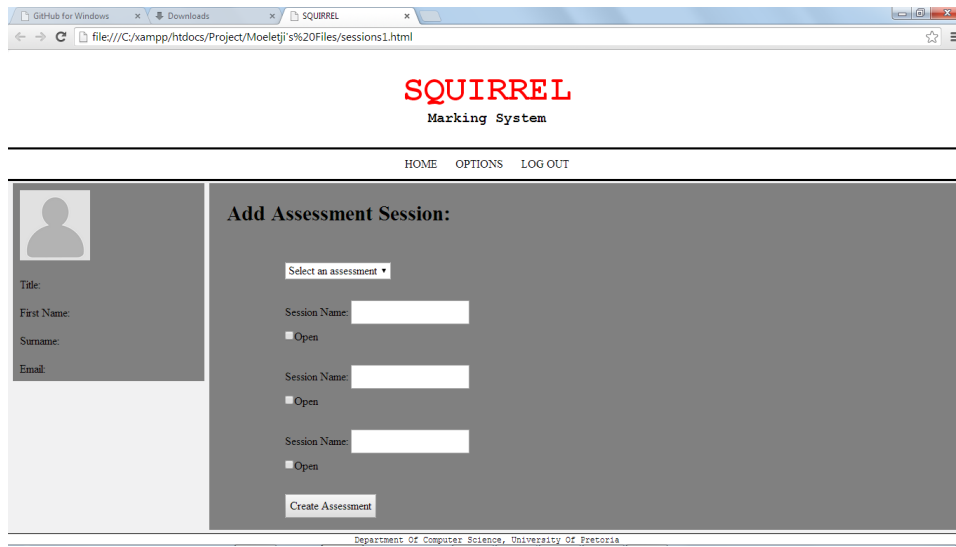


Figure 9: Screen design for adding sessions for an atomic assessment.

### 1.3 Marks Management

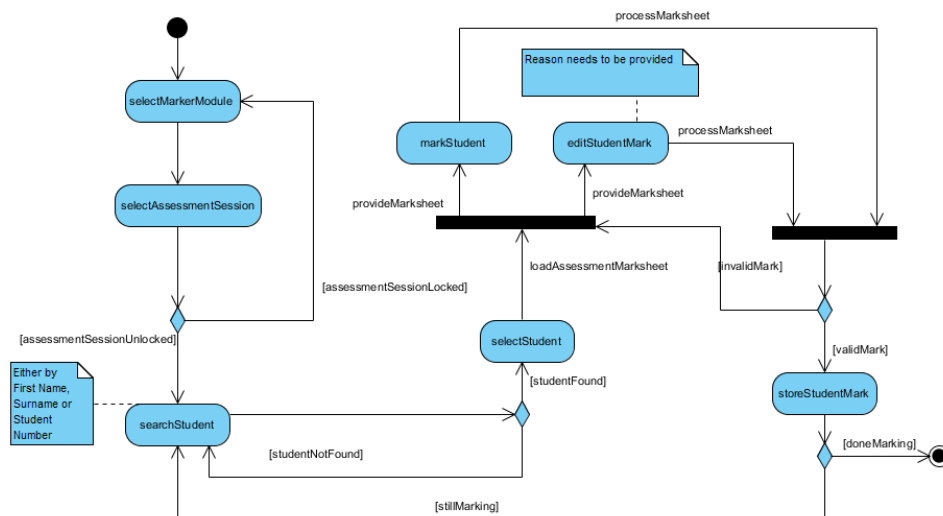


Figure 10: Activity diagram depiction of how a student would get marked.

The activity diagram(Figure 10) depicts how a marker would go about marking a student. The activity diagram is closely linked with the screen designs as it shows how the user would go about marking a student.

### 1.3.1 Mobile Interface Screen Designs

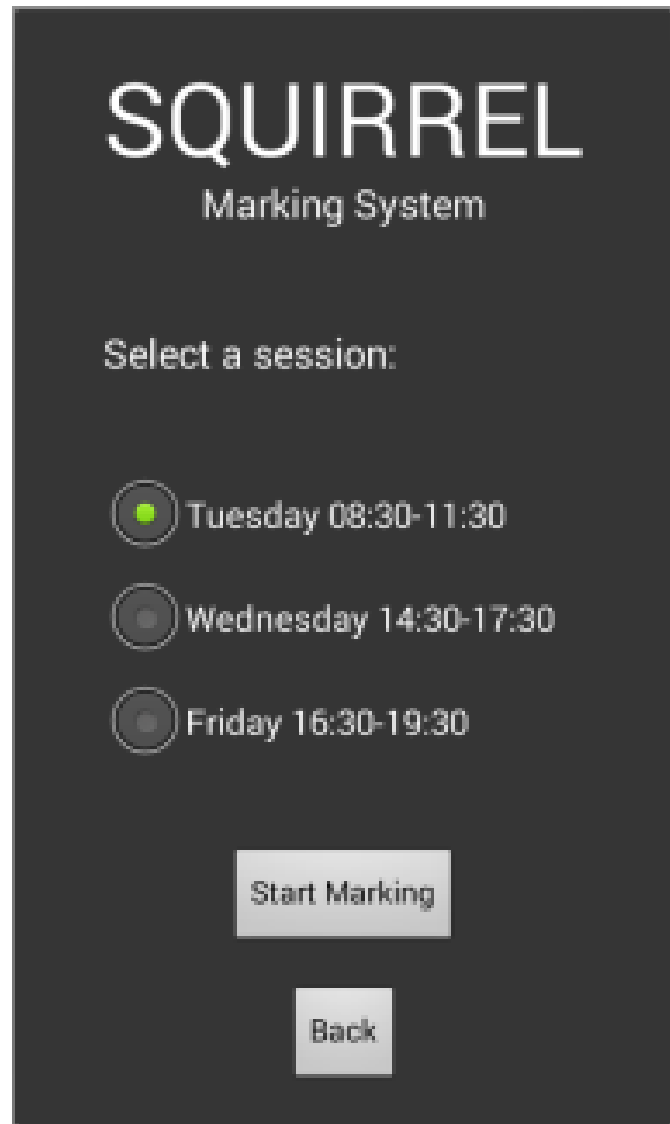


Figure 11: Screen design of assessment sessions.

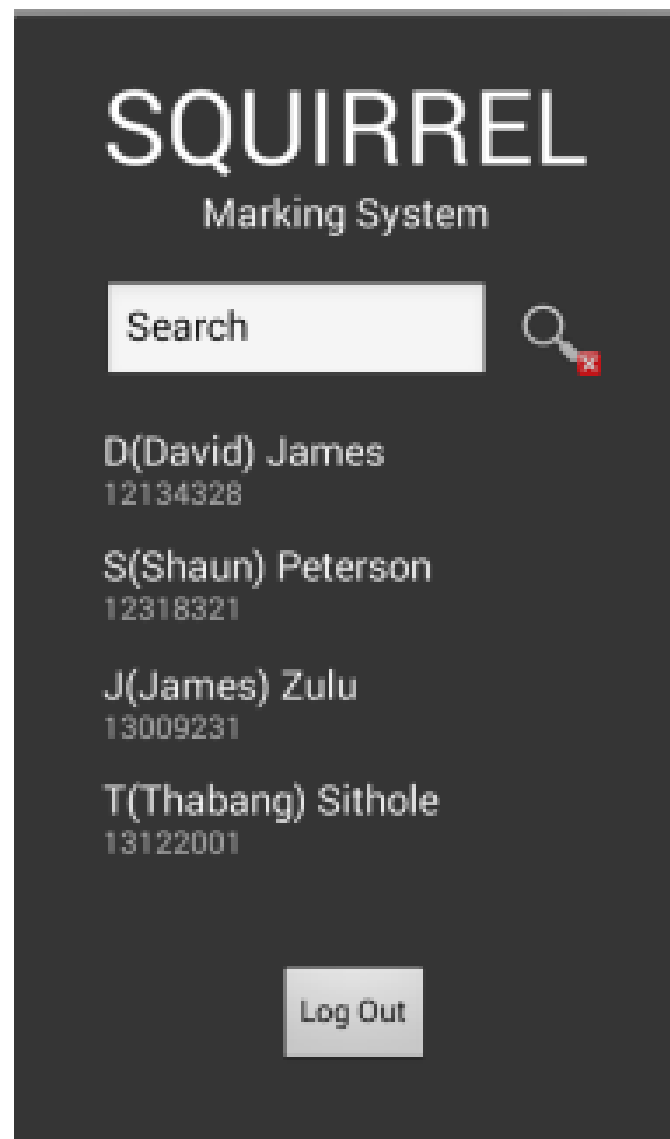


Figure 12: Screen design of how the students would be displayed and search for on the system.

The image shows a dark-themed web interface for a marking system. At the top, the word "SQUIRREL" is displayed in a large, white, serif font, with "Marking System" in a smaller, white, sans-serif font below it. Further down, the student's name "D(David) James" and ID "12134328" are shown in a white, sans-serif font. Below this, there are two sections for entering marks. The first section is labeled "Porgram compiles (5)" and has a light gray rectangular input field below it. The second section is labeled "Correct output generated (5)" and also has a light gray rectangular input field below it. At the bottom left, the word "Total:" is displayed in a white, sans-serif font. Centered at the bottom is a light gray rectangular button with the word "Submit" in a white, sans-serif font.

Figure 13: Screen design of the interface used to enter student marks.

### 1.3.2 Web Interface Screen Designs

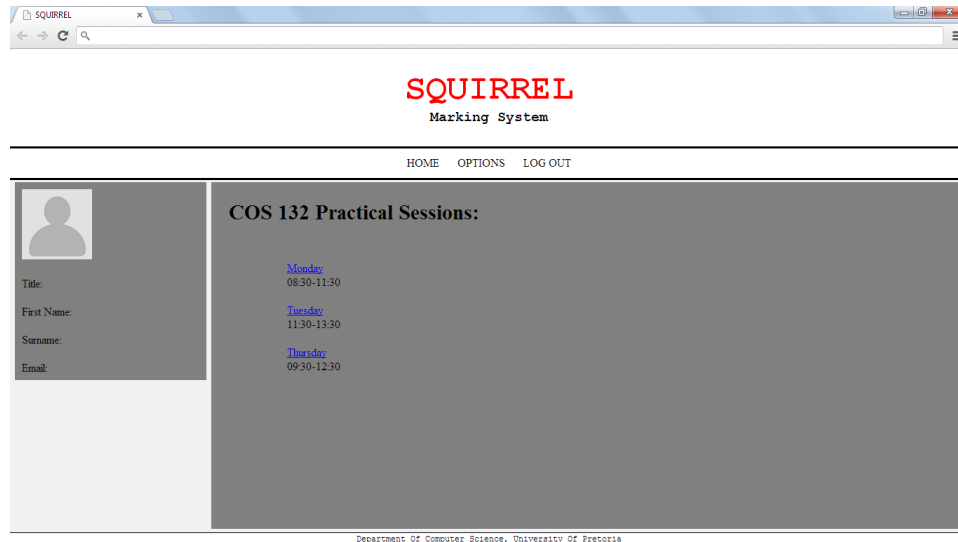


Figure 14: List of available marking sessions.

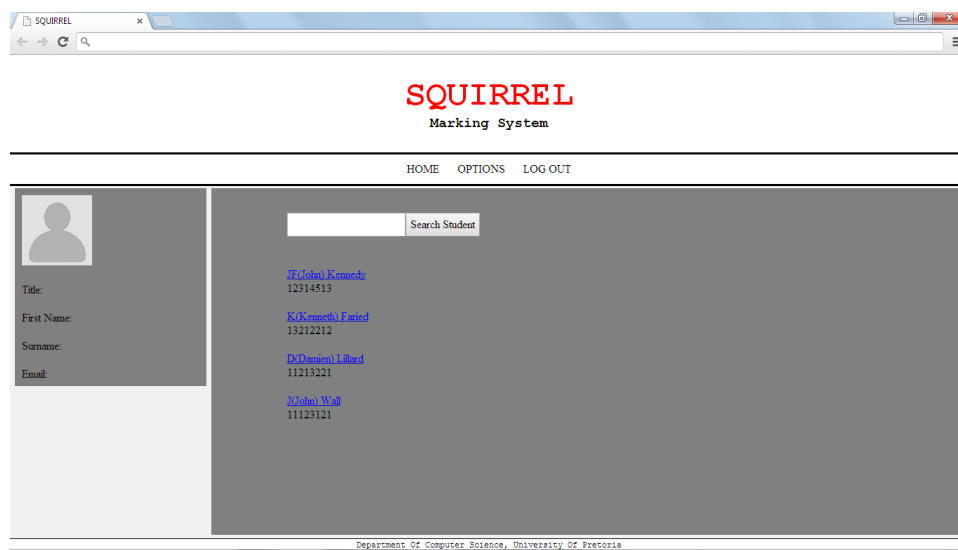


Figure 15: List of students in the sessions who need to be marked.

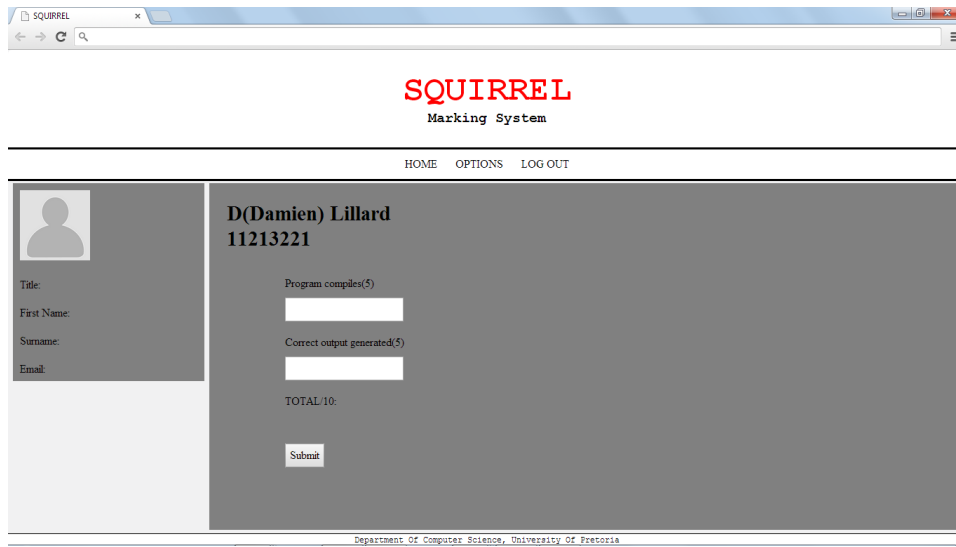


Figure 16: A student being marked.

## 1.4 Reporting

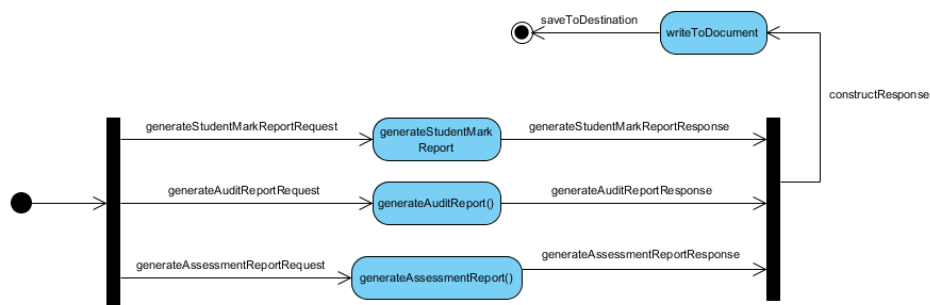


Figure 17: Activity diagram of how reports would be generated by users.

Students will be able to generate their mark reports on either platform (mobile or web interface), while lecturers will only be able to generate assessment and audit reports via the web interface.

#### 1.4.1 Mobile Interface Screen Designs

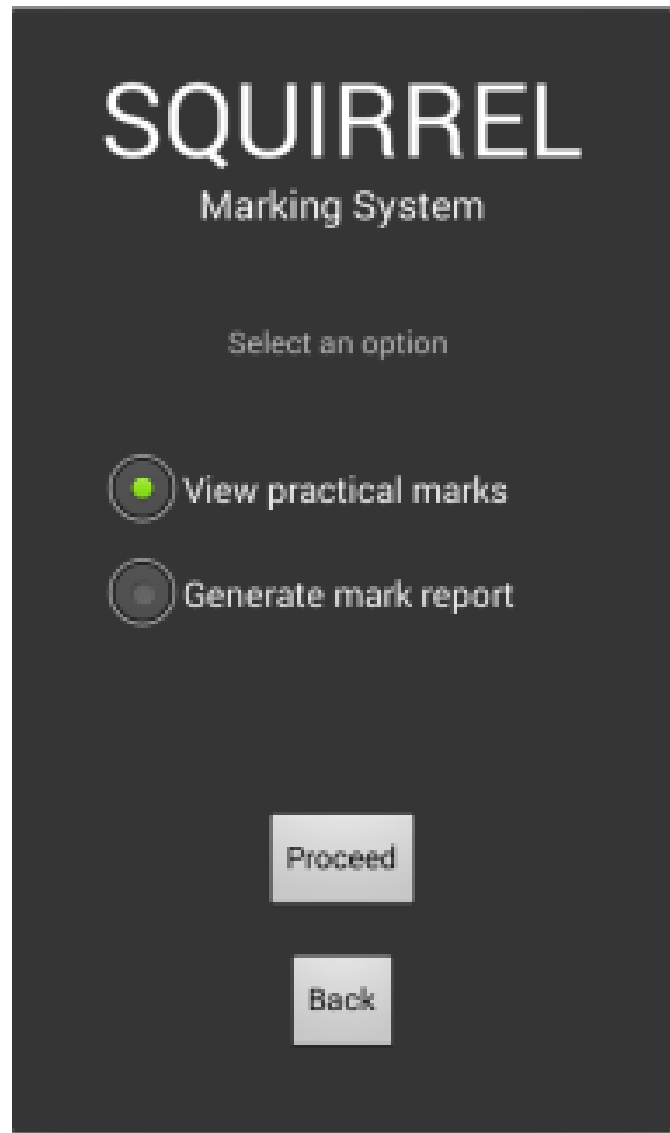


Figure 18: Options of reports a student can generate.

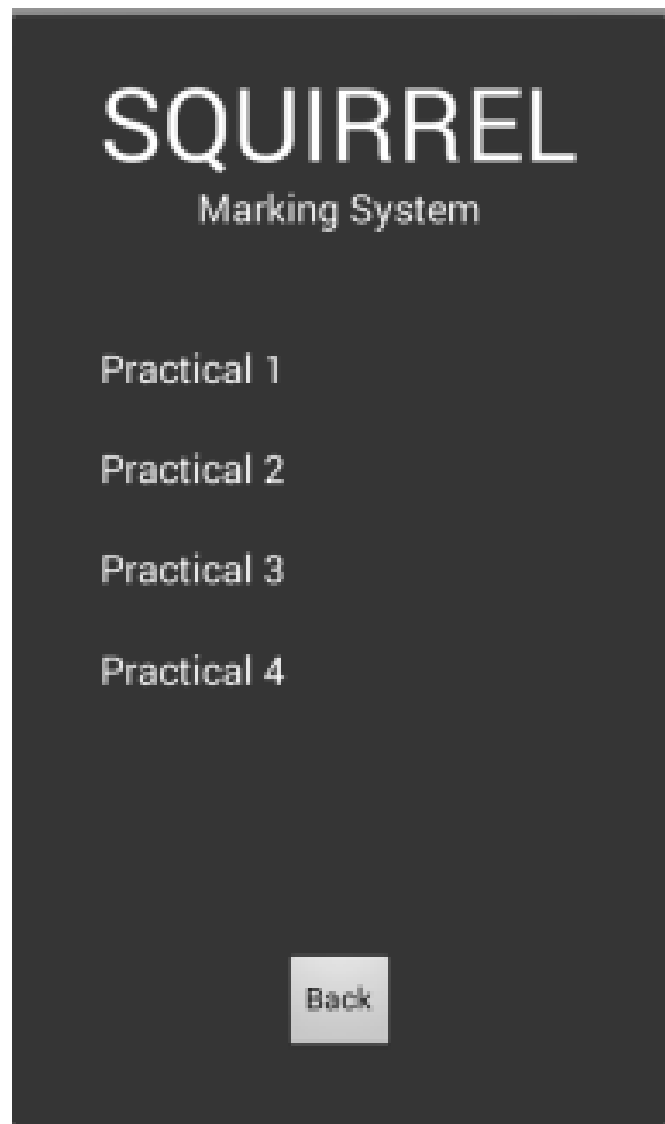


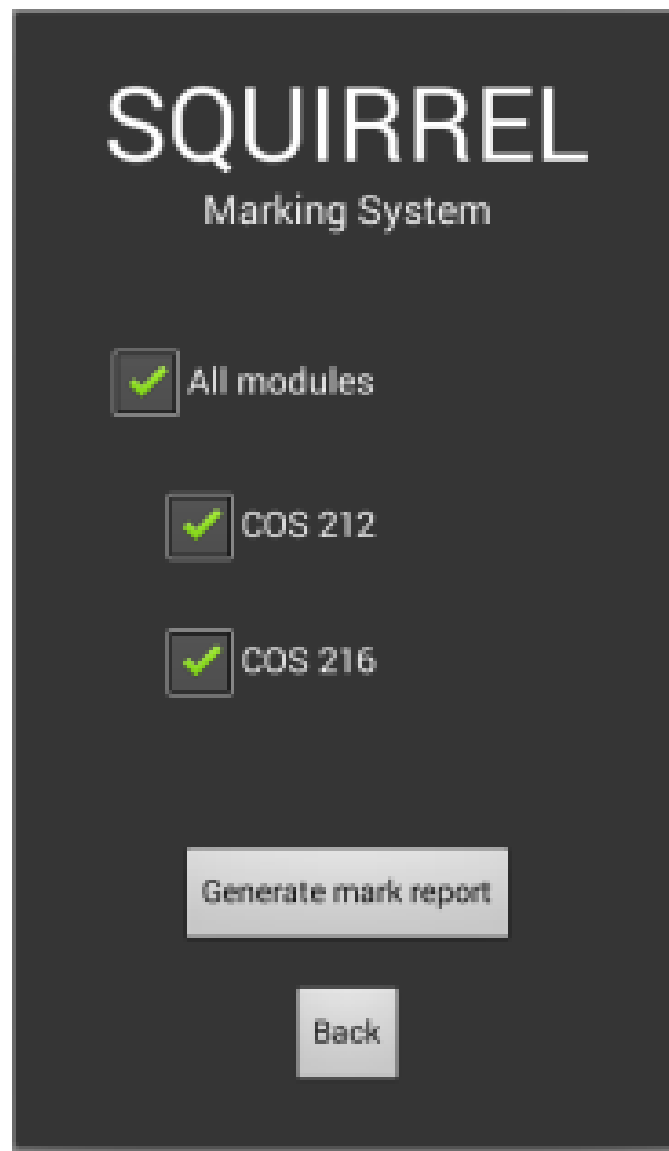
Figure 19: List of practicals.



The image shows a dark-themed user interface for a marking system. At the top, the word "SQUIRREL" is displayed in a large, white, serif font, with "Marking System" in a smaller, white, sans-serif font below it. The main heading "Marks for Practical 1:" is in a white, sans-serif font. Below this, there are two items: "Program compiles (5)" and "Correct output generated (5)", both in a white, sans-serif font. Under each item is a label "Mark Obtained:" followed by a white input field. At the bottom, the text "Total(10) :" is shown in a white, sans-serif font, followed by another white input field. A "Back" button, consisting of a white rectangle with the word "Back" in a dark, sans-serif font, is centered at the bottom of the interface.

SQUIRREL	
Marking System	
Marks for Practical 1:	
Program compiles (5)	Mark Obtained: <input type="text"/>
Correct output generated (5)	Mark Obtained: <input type="text"/>
Total(10) : <input type="text"/>	
<input type="button" value="Back"/>	

Figure 20: Screen design of a report for a students practical 1.



The image shows a dark-themed user interface for the 'SQUIRREL Marking System'. At the top, the title 'SQUIRREL' is displayed in a large, white, serif font, with 'Marking System' in a smaller, white, sans-serif font below it. Below the title, there are three selection options, each consisting of a small square icon with a green checkmark and a text label to its right. The first option is 'All modules', the second is 'COS 212', and the third is 'COS 216'. At the bottom of the interface, there are two buttons: a larger, light gray button labeled 'Generate mark report' and a smaller, light gray button labeled 'Back' positioned directly below it.

SQUIRREL  
Marking System

☒ All modules

☒ COS 212

☒ COS 216

Generate mark report

Back

Figure 21: Screen design for generating a students' mark report.

### 1.4.2 Web Interface Screen Designs

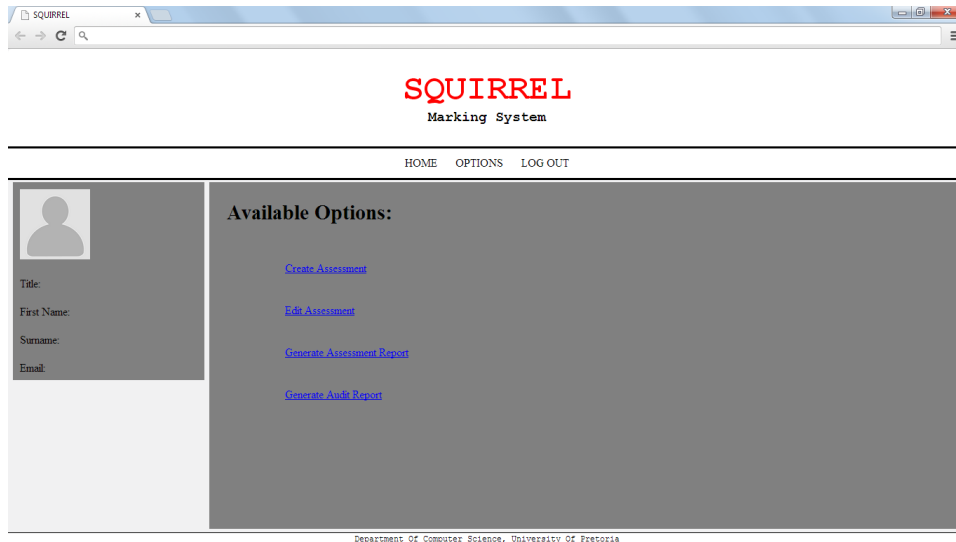


Figure 22: Report options lecturers have.

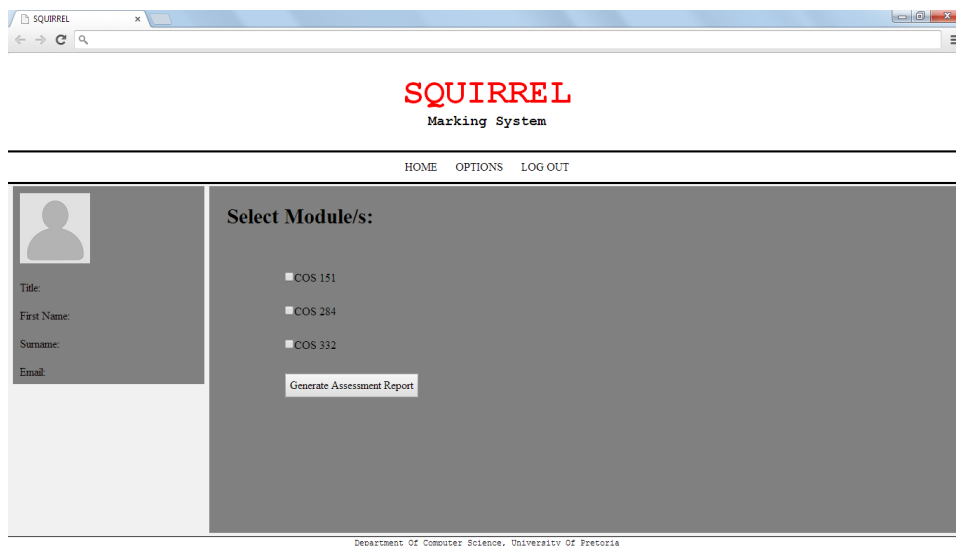


Figure 23: Screen design for generating assessment reports.

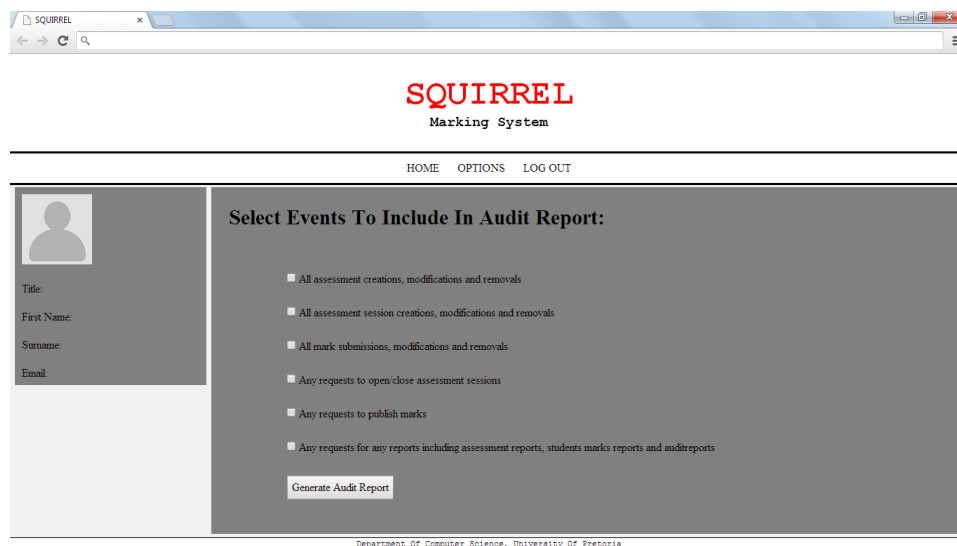


Figure 24: Screen design for generating audit reports.