Introduction to Software Engineering

Group Coursework

Team 49

Cover Page Draft

Functional Requirements

User requirements definition will be denoted by numbers and system requirements by letters

1. Module leader can create a report of a possible misconduct case
   a. System creates a query form to be filled out by the module leader
   b. System should validate student ID
   c. The form must contain the fields:
      i. Module code
      ii. Academic year
      iii. Term
      iv. Student number
      v. Student name
      vi. Student email
      vii. Type of misconduct
      viii. Type of assessment
      ix. % of marks that affect the total mark of the module
      x. Anonymized evidence
   d. System should validate the form ensuring its fields match specification
   e. System should generate a unique code for the case
   f. Allows the module leader to submit the form
   g. Sends the submitted form to the Academic Misconduct Team (AMT)

2. Member of AMT checks program the student is on and decides if there is enough evidence
   a. System must be able to access the student database
   b. System must be able to lookup students' details

3. If there is enough evidence the case should be forwarded to the home department and the home department's AMT should be notified
   a. System sends the case to the home department
   b. System sends notification to home department AMT

4. Investigatory interview is scheduled
   a. The system must have a scheduling service

5. Invite sent to the student
   a. The system creates the invitation in combination with the scheduling system
   b. The system then sends the invite to the student either via email or via account
      i. If via email the system would need an integrated mail client
      ii. If via account, the system would need a database with accounts stored and be able to lookup the student's account to send the notification

6. Student confirms attendance
   a. The system receives the reply and logs it onto the system

7. Email of summary of interview sent to student
   a. The system must be capable of note taking
   b. The system must have an integrated email client
   c. System must be able to lookup student's details
   d. System must be able to form connection to external email server

8. The case is referred to SCO
   a. The system takes note that the case has been referred
   b. Follow requirement 11

9. SCO verifies if there are previous offences at the college level
    a. System must be able to access previous cases
    b. System must be able to display previous case in a HTML format
    c. System must be able to lookup specific cases involving specific students
    d. System must be able to return a suitable message if there are no cases involving requested student else returns all cases against the student.

10. If there are no previous cases
    a. Requirement 4 - 8 is carried out with at least 7 days' notice given to module leader and a member of misconduct team.
    b. System should include electronic form hosting service with a capability to set a deadline
    c. System sends form to student and notifies them
    d. System should only allow 5 days for the student to fill out and sign form
    e. System sends completed form to misconduct team and notifies them
    f. System allows misconduct team to validate the form
        i. Return the form to the student to correct if needed
        ii. Else notify the professional service team (PS) who sends copy to student, module leader and SCO
    g. System should be able to allow user to change status of current open case (drop/close)

11. If there are previous offences
    a. System should be able to send email to module leader asking for description of case
    b. System should allow hosting of a referral form to be completed by misconduct team
    c. System should be able to send case to SCA
    d. System should be able to schedule a hearing by the SCA
    e. Outcome of cases is to be sent by email to the PS team and stored in the database

12. All actions must be time-stamped
    a. System must record all actions and associate them with the time and date
    b. The system must record the user who completed the action with the following details
        i. Name
        ii. ID number

13. Only users from relevant departments can access the system
    a. System must include user authentication
    b. System must be able to store and refer to a list of relevant admin departments which can access the system

14. Department staff and students have different sign-on portals with different permissions
    a. System must be able to differentiate between students and staff
    b. System must offer different functionality to different users depending on the type of user.

Non-Functional Requirements

1) Flexibility
2) Have the ability to change misconduct process due to dynamic nature

3) Only display cases which the user is relevant in
4) View multiple cases and see which actions are currently required from the user in them
5) Multiple cases can be created and viewed simultaneously by different users
6) For Scheduling have form to select type of event along with location and issue invites to participants, different interview types may have different requirements to schedule
7) Students do not have access to create/modify cases
8) Input should be validated to insure it meets field specification
9) Student ID should be checked to ensure it is a valid student ID
10) All cases are kept even if they were dropped
11) Only actions that the current user has the power to do will be displayed to that user
12) Notifications be sent by email as well as displayed on the appropriate user portal
13) Software has to be maintainable as it will be in long term use.
14) System should not be required to run overnight due to environment requirements.
15) Easy to use interface.
16) The system must use SCO APIs that are already provided, the operations are: Providing number of previous offences, Referral of cases and Consultation of status of cases.
17) Storing or displaying information in accordance too confidentiality legalisation.

Description of Use Cases

- Name: Send evidence
- Short description: additional evidence is sent to the Academic Misconduct Team (AMT)
- Precondition: additional evidence is requested by the AMT
- Postcondition: extra evidence is forwarded to the AMT
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Module Leaders OR Lectures
- Trigger: the AMT requests further information
- Standard process:
  o A request was filed, by the AMT
  o the module leaders or lecturers forwards extra evidence
  o the further evidence is reviewed anew

- Name: Review reported case
- Short description: a reported case is now reviewed and deemed to have sufficient evidence
- Precondition: there must be a case to be reviewed
- Postcondition: the case is classified to be worthy of further action
- Error situations: case is invalid
- System state in the event of an error: an update is requested
- Actors: Academic Misconduct Team
- Trigger: a case has been received from the module instructor
- Standard process:
  o 1. the new case is received
  o 2. the aforementioned case is analysed for validity
  o 3. the case is analysed for sufficient evidence
  o 4. the case is referred
- Alternative process(es):
  o 2'. the case doesn't contain sufficient validity
  o 3'. further information is requested from student or PST
  o 3". the case does not contain sufficient evidence
  o 4". a request for more evidence is given to the module instructor (abstract)

- Name: Request more evidence
- Short description: upon review, the case has been concluded to be valid, but requires further evidence
- Precondition: the module instructor is a module instructor relevant to the case
- Postcondition: more evidence is requested from module instructor (abstract)
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Academic Misconduct Team
- Trigger: the case requires further evidence for a conclusion to be made
- Standard process:
    - 1. a request for more evidence is placed to the module instructor (abstract)
    - 2. the evidence is received
    - 3. the case is re-evaluated for sufficiency of evidence
    - 4. the case is referred
- Alternate process:
    - 3'. the case is still not valid
    - 4'. a repeated request is made
    - 5'. if still not sufficient after this request, the case is dropped

- Name: Refer case
- Short description: the case is now sent to the Department Misconduct Team (DMT)
- Precondition: a case exists and is valid and with sufficient evidence
- Postcondition: the case is sent to the DMT
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Academic Misconduct Team
- Trigger: the case is with complete info to be forwarded
- Standard process:
    - 1. the case is received
    - 2. the case is sent to the DMT

- Name: Check student's past offences
- Short description: the DMT shall check if the included student (in the case file) has any past offences
- Precondition: the case exists and must have a student's information
- Postcondition: the past offences are located (if any)
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Department Misconduct Team
- Trigger: the case must include a student's complete history
- Standard process:
    - 1. the case is received
    - 2. the student's past offences are included
    - 3. the case is forwarded

- Name: Declare case type
- Short description: the case's type is decided
- Precondition: the case exists and must have sufficient evidence
- Postcondition: the case's type is decided upon
- Error situations: N/A

- System state in the event of an error: N/A
- Actors: Department Misconduct Team
- Trigger: the case must include the type for the appropriate response to be made
- Standard process:
    - 1. decide if case is with 3rd party involvement
    - 2. the case type is included
    - 3. the case is forwarded
- Alternate process:
    - 1'. the case is without third-party involvement

- Name: Log action
- Short description: any kind of action taken is logged in the system
- Precondition: any kind of system action is taken
- Postcondition: the specific action is logged
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: N/A
- Trigger: any type of system action is made
- Standard process:
    - 1. an action is taken
    - 2. the action is then logged, and possibly placed on portal (if relevant)

- Name: Case dropped
- Short description: a invalid case is removed from active case
- Precondition: a case exists and is NOT valid or doesn't have sufficient evidence
- Postcondition: the case is dropped
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: N/A
- Trigger: the case doesn't have sufficient evidence or info
- Standard process:
    - 1. a case is received
    - 2. the case is not valid
    - 3. the case is dropped
- Alternative process:
    - 2'. the case is valid
    - 3'. the case is without sufficient evidence
    - 4'. the case is dropped

- Name: Submit interview summary
- Short description: complete a summary of a specific interview
- Precondition: an interview has taken places
- Postcondition: the summary is posted on the portal
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: SCO
- Trigger: a interview has been completed
- Standard process:
    - 1. an interview is completed
    - 2. a summary is made

- Name: Schedule
- Short description: schedule a hearing, investigation interview or LAMP interview
- Precondition: a case exists, requires further insight, and/or needs validation
- Postcondition: a meeting is scheduled
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Academic Misconduct Team OR SCO
- Trigger: further investigation
- Standard process:
  - 1. a case is received, and needs further action
  - 2. a meeting type is decided
  - 3. the appropriate meeting type is scheduled

- Name: Create and complete form
- Short description: the interview summary is made, and the student must sign a form within 5 days
- Precondition: the student is the relevant one to the case
- Postcondition: the case is updated
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Student
- Trigger: the case decision has been reached, and sent out
- Standard process:
  - 1. a form is requested by the misconduct team
  - 2. the student signs the form

- Name: Confirm attendance
- Short description: a student's attendance to an interview is confirmed
- Precondition: the student is the one being asked to attend
- Postcondition: the student is confirmed to attend meeting
- Error situations: the student doesn't confirm
- System state in the event of an error: request a re-schedule
- Actors: Student
- Trigger: an interview has been scheduled
- Standard process:
  - 1. an interview is scheduled
  - 2. student confirms attendance
- Alternative process:
  - 2'. student doesn't confirm
  - 3'. the interview would be rescheduled

- Name: Case registered
- Short description: a concluded case is registered with PST
- Precondition: a case is concluded
- Postcondition: a case is concluded and action has been decided upon
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: Professional Service Team
- Trigger: the case has been decided upon
- Standard process:
  - 1. a case is received

- o 2. the case is checked for a decision and action
- o 3. the case is registered

- Name: Case closed
- Short description: the case has been reviewed, and checked, and a decision has been made
- Precondition: there was a case, it has been reviewed, meeting needs to have been convened, and decision has been reached
- Postcondition: case is closed
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: PST
- Trigger: a decision has been reached
- Standard process:
  - o 1. case decision made
  - o 2. case closed

- Name: Send information
- Short description: the case info has been updated, and now prepared to be released
- Precondition: the must be a case update to send
- Postcondition: information update is released to be sent out
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: N/A
- Trigger: an update status is made on the case
- Standard process:
  - o 1. info on case is updated
  - o 2. released to be sent out

- Name: Display on relevant user's portal
- Short description: a case or case update is shown on a user's portal
- Precondition: a case must exist, and/or must have an status update
- Postcondition: the info is displayed on user's portal
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: N/A
- Trigger: info is to be sent out
- Standard process:
  - o 1. info is updated
  - o 2. the info is released for sending
  - o 3. the info is shown on the user's portal

- Name: Send email
- Short description: released info update is sent via email
- Precondition: new info has been released and an email included in file, with the acceptance of receiving updates via email
- Postcondition: the email is sent
- Error situations: no consent for emails is given
- System state in the event of an error:
- Actors: N/A
- Trigger: the info is released for sending

- Standard process:
    - o 1. the info update is released
    - o 2. system checks if email consent is given
    - o 3. email is sent out
- Alternative process:
    - o 2'. no consent given
    - o 3'. no email is sent out

- Name: Submit hearing result
- Short description: the hearing results are received by the PST
- Precondition: the hearing with student has taken place
- Postcondition: the results are received by PST
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: SCO
- Triggers: the hearing has taken place
- Standard process:
    - o 1. the hearing is completed
    - o 2. the hearing is result is recorded
    - o 3. the result is forwarded to PST

- Name: Receive case
- Short description: a case is received, and a hearing can now be scheduled
- Precondition: a case exists and requires a hearing with the student
- Postcondition: a hearing is scheduled
- Error situations: N/A
- System state in the event of an error: N/A
- Actors: SCO
- Trigger: a case has been forwarded by misconduct teams
- Standard process:
    - o 1. a case is received
    - o 2. hearing is scheduled
    - o 3. the student accepts the hearing date