

CSCI 5801 - Assignment 2

Team 17

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1. Requirements

Each requirement that the system will follow is detailed in the following pages.

Requirement #: 1

Use Case: 1

Introduction: The system must require users to enter credentials before using it.

Inputs: University ID and password

Description: The user enters an ID and password and it is logged in if and only if the ID and password are valid. If logged in, the user may use the system. If the credentials are not valid, the user is not logged in.

Outputs: Access is granted or denied

Persistent Changes: The user will be logged in and able to view and use the system.

Related Requirements:

Requirement #: 2

Use Case: 2

Introduction: The system must allow prospective TAs to fill out and submit a TA application.

Inputs: Application information

Description: The application shall allow the student to:

1. Indicate the type of appointment requested (Req 3)
2. Provide prior appointment details (Req 4)
3. List course preferences (Req 5)
4. Enter personal and academic details (Req 6)
5. Enter scores for language and technical qualifications (Req 7)

The student shall be able to submit the completed application to the system.

Outputs: Application submission

Persistent Changes: The application will be submitted and viewable by administrative staff.

Related Requirements: 3, 4, 5, 6, 7

Requirement #: 3**Use Case: 2**

Introduction: The TA application shall include a place to indicate the type of appointment.

Inputs: Type of appointment

Description: Within the TA application, the prospective TA shall be allowed to indicate the type of appointment requested. The choices are for type of appointment are 50% and 25%.

Outputs: None

Persistent Changes: The information entered by the TA will be stored on the application.

Related Requirements: 2

Requirement #: 4**Use Case: 2**

Introduction: The TA application shall include a place to provide prior appointment details.

Inputs: Prior appointment details

Description: Within the TA application, the prospective TA shall be allowed to enter their prior appointment details. This shall include the course and the number of semesters that the student served as a TA.

Outputs: None

Persistent Changes: The information entered by the TA will be stored on the application.

Related Requirements: 2

Requirement #: 5**Use Case: 2**

Introduction: The TA application shall include a place to list course preferences.

Inputs: Course preferences

Description: Within the TA application, the prospective TA shall be allowed to enter their course preferences and indicate priority for these choices.

Outputs: None

Persistent Changes: The information entered by the TA will be stored on the application.

Related Requirements: 2

Requirement #: 6

Use Case: 2

Introduction: The TA application shall include a place to include personal and academic details.

Inputs: Personal and academic details

Description: Within the TA application, the prospective TA shall be allowed to include personal and academic details. Example of these details are:

1. Program in which they are enrolled
2. Department to which they belong
3. Transcript

Outputs: None

Persistent Changes: The information entered by the TA will be stored on the application.

Related Requirements: 2

Requirement #: 7

Use Case: 2

Introduction: The TA application shall include a place to enter scores for language and technical qualifications.

Inputs: Test scores

Description: Within the TA application, the prospective TA shall be allowed to enter scores for language and technical qualifications.

Outputs: None

Persistent Changes: The information entered by the TA will be stored on the application.

Related Requirements: 2

Requirement #: 8

Use Case: 3

Introduction: The system shall allow faculty members to recommend TAs.

Inputs: TA recommendation information

Description: The faculty member shall be able to fill out a TA recommendation and submit it to the system.

Outputs: Recommendation submission

Persistent Changes: The recommendation will be submitted and viewable by administrative staff.

Related Requirements:

Requirement #: 9

Use Case: 4

Introduction: The system shall allow faculty members to request TAs.

Inputs: TA request information

Description: The faculty member shall be able to fill out a TA request form and submit it to the system.

Outputs: Request submission

Persistent Changes: The request will be submitted and viewable by administrative staff.

Related Requirements:

Requirement #: 10

Use Case: 5

Introduction: The system shall allow budget information to be stored and allow administrative staff to view it.

Inputs: Budget information

Description: The system shall be able to store budget information. Once stored, this data shall be viewable by administrative staff.

Outputs: Data storage

Persistent Changes: Data will be stored in system and viewable by administrative staff.

Related Requirements:

Requirement #: 11

Use Case: 6

Introduction: The system shall allow course and position information to be stored and allow administrative staff to view it.

Inputs: Course and position information

Description: The system shall be able to store course and position information, including:

1. List of offered courses
2. Estimated number of TA positions for each course

Once stored, this data shall be viewable by administrative staff.

Outputs: Data storage

Persistent Changes: Data will be stored in system and viewable by administrative staff.

Related Requirements:

Requirement #: 12

Use Case: 15

Introduction: The system shall allow summary and statistics information to be stored and allow administrative staff to view it.

Inputs: Statistics from past semesters

Description: The system shall be able to store summary and statistics information from past years. Once stored, this data shall be viewable by administrative staff.

Outputs: Data storage

Persistent Changes: Data will be stored in system and viewable by administrative staff.

Related Requirements:

Requirement #: 13

Use Case: 7

Introduction: The system shall provide a way to determine a priority value for prospective TAs and allow administrative staff to view the applications in this order.

Inputs: TA application, faculty recommendations, faculty requests

Description: Administrative staff shall be able to view the TA applications that have been submitted. A priority score shall be determined for each applicant, based on a number of attributes. The applicants shall be displayed in the order determined by the attributes.

Outputs: Sorted applicants

Persistent Changes: Each applicant will be tied to their priority score in the system, which is used for the assignment process.

Related Requirements:

Requirement #: 14

Use Case: 8

Introduction: The system shall allow administrative staff to assign a TA to a course.

Inputs: TA, course

Description: Administrative staff shall be able to assign a TA to a course. The TA is chosen according to a priority score, which is determined by several attributes (Req 13). A TA shall be allowed to be assigned to at most 2 courses.

Outputs: Course assignment

Persistent Changes: The TA will be assigned to the course.

Related Requirements: 13

Requirement #: 15

Use Case: 9

Introduction: The system shall allow payroll staff to view the list of appointments made by administrative staff.

Inputs: N/A

Description: Payroll staff shall be able to view the list of appointments that have been made by administrative staff. An appointment is expressed as the TA and the percentage.

Outputs: List of appointments

Persistent Changes: None

Related Requirements:

Requirement #: 16

Use Case: 10

Introduction: The system must allow payroll staff to send appointment offers to appointed TAs.

Inputs: TA, Percentage

Description: Payroll staff shall be able to send appointment offers to the TAs included in the list of appointments. The appointed TA shall be notified of the offer.

Outputs: Offer Sent

Persistent Changes: The offer will be viewable by the appointed TA.

Related Requirements: 17, 22

Requirement #: 17

Use Case: 11

Introduction: The system must allow appointed TAs to respond to an appointment offer.

Inputs: TA, response (accept or decline)

Description: Appointed TAs shall be able to choose how they respond to the appointment offer. They can either accept or decline the offer. The response shall be sent to administrative staff.

Outputs: Response sent

Persistent Changes: The response will be viewable by administrative staff.

Related Requirements: 16, 22

Requirement #: 18

Use Case: 12

Introduction: The system shall allow appointed TAs to resign from their appointment.

Inputs: TA, desire to resign

Description: Appointed TAs shall be able to resign from their appointment. Administrative staff shall receive a notification of the resignation.

Outputs: Resignation sent

Persistent Changes: The resignation will be viewable by administrative staff.

Related Requirements:

Requirement #: 19

Use Case: 13

Introduction: The system shall provide a way to store the appointment status of a TA and allow administrative staff to view it.

Inputs: TA

Description: Administrative staff shall be able to view the appointment status of a TA.

Outputs: Appointment status

Persistent Changes: None

Related Requirements: 24

Requirement #: 20

Use Case: 13

Introduction: The system shall allow administrative staff to update the appointment status of a TA.

Inputs: TA, appointment status

Description: Administrative staff shall be able to update the status of a TA. A notification of the change shall be sent to the TA, the faculty member for the course, and payroll staff.

Outputs: Status updated

Persistent Changes: The new appointment status will be tied to the TA in the system.

Related Requirements: 22

Requirement #: 21

Use Case: 14

Introduction: The system shall allow administrative staff to make announcements.

Inputs: Message, Recipients

Description: Administrative staff shall be able to send announcements to other users. Staff members shall be able to:

1. Write the announcement
2. Choose recipients (other users of the system)
3. Send the announcement

Outputs: Message sent

Persistent Changes: The announcement will be viewable by the recipients.

Related Requirements:

Requirement #: 22

Use Case: 10, 11, 12, 13, 14

Introduction: The system shall provide a way for users to receive notifications.

Inputs: Recipient, Notification

Description: Users shall be able to receive notifications that are relevant to them. A notification shall be sent in the following situations:

1. An appointed TA responds to an offer (Req 17)
2. An appointed TA resigns from an appointment (Req 18)
3. The appointment status of a TA is updated (Req 20)
4. An announcement is sent (Req 21)

Outputs: Notification Received

Persistent Changes: The notification will be viewable by the recipient.

Related Requirements: 17, 18, 20, 21

2. Conceptual Model

3. Interaction Diagrams

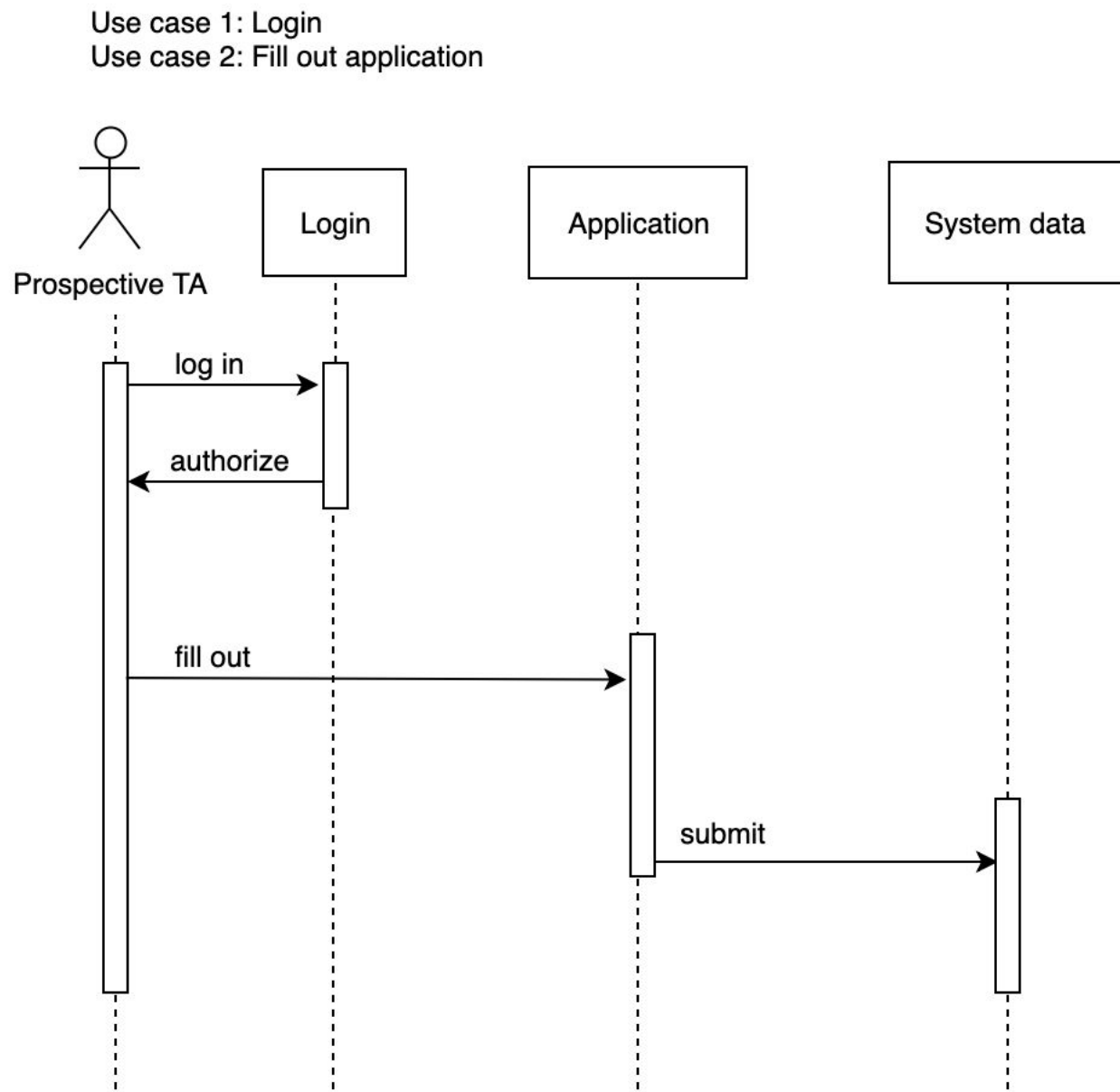


Figure 1

Figure 2

Figure 3

Figure 4