

Use Case for University Applicant Determination and Messaging Transactor

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CSci5801: Software Engineering
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Document Revision History

Rev	Date	Author	Change Description
1.0	02/14/2016	Krystal Lee, Qi Wu, Yuanchen Lu, Zixiang Ma	Use Case Draft.
2.1	03/03/2016	Krystal Lee	Removal of “Out of Scope” Use Cases.
2.2	03/15/2016	Krystal Lee	Added use cases: 1.5 Modified use cases: 1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 1.8, 1.9, 1.10 Updated Diagram 1
2.3	03/22/2016	Krystal Lee	Added header Modified use cases: 1.4

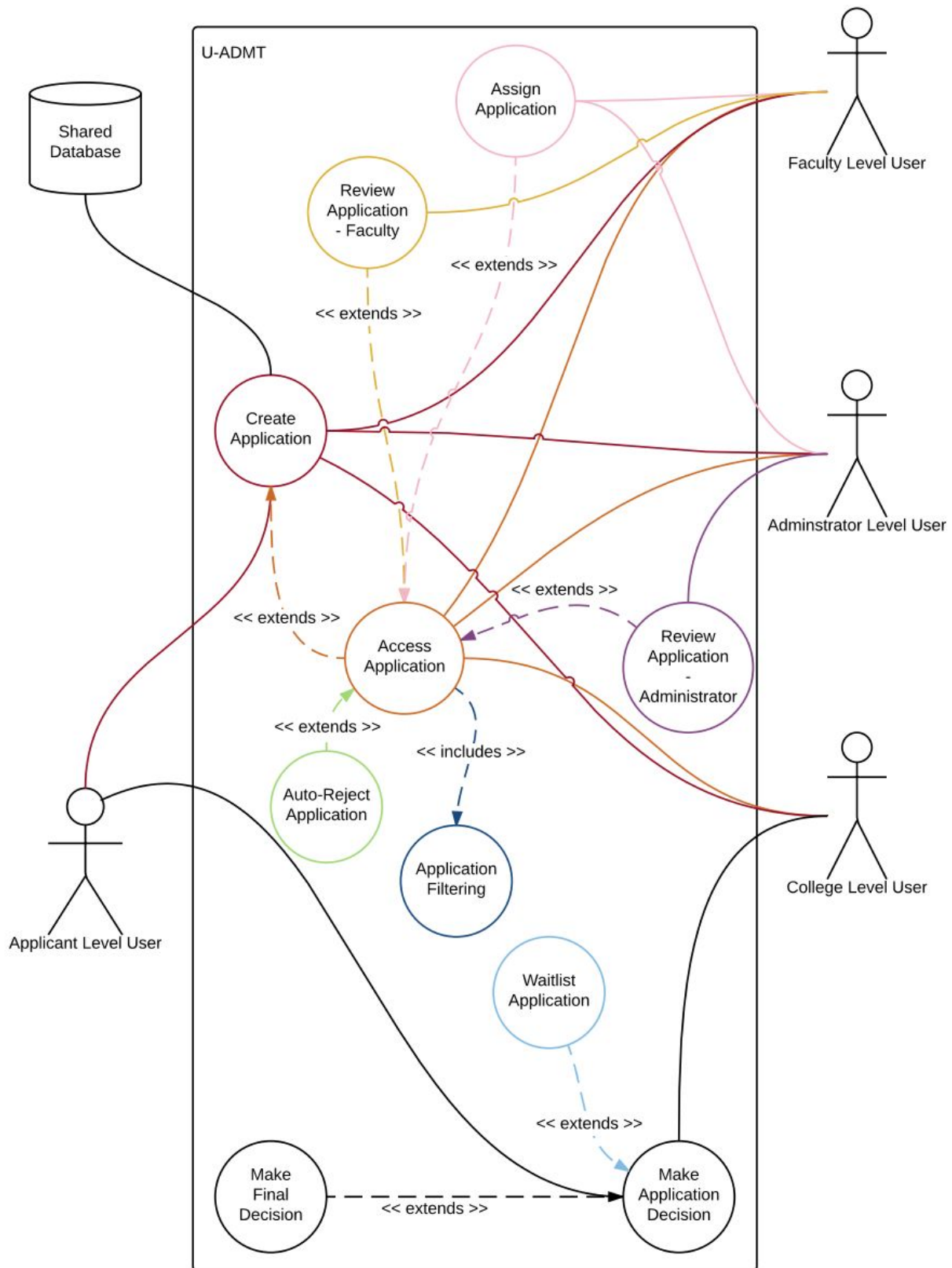
Introduction

This document does not capture all possible scenarios. Instead it focuses on some most-likely scenario cases. Due to this the Use Cases and Diagrams are not complete, and may even be considered inaccurate for some conflicting scenarios. For example, we decided to showcase the application review by faculty feature by only writing a use case for when the application is an undergraduate application.

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1. Diagram: Application Review Process



1.1 Use Case Name: Create Application

Iteration: Filled

Summary: The system gets application data from a shared database, and creates an application.

Basic Course of Events:

1. The system creates an application with an unique application number.
2. The system gets the application data from the shared database.
3. The system fills the application with the application data.
4. The system validates the application data.
5. The system gives the application an application status of undecided.
6. The system makes the application status accessible to all users.
7. The system makes the application accessible to all college and department level users.
8. If the user can access the application they can complete Access Application (Use Case 1.2).

Alternative Paths:

- **Multiple Applications:** In step 2, if the application data is for more than one college or department the system will create multiple applications and continue on to step 3 for each application.

Exception Paths:

- **Invalid Application:** In step 4, if the application data used to generate the application is invalid the system will stop the application review process, and change the application status to rejected.

Extension Points: Step 8 - Access Application (Use Case 1.2)

Trigger: An applicant level user submits application data through an application service connected to the shared database.

Assumptions: The shared database accessible by the system.

Precondition: The system is available, and has access to the shared database.

Postcondition: The application has been created, and ready for further review.

Author: Krystal Lee

Date: March 15, 2016

1.2 Use Case Name: Access Application

Iteration: Filled

Summary: The system gives the user access to the application, and gives user options on what to do with the application.

Basic Course of Events:

1. The system gives to the user the application, and option to filter all applications
2. If the user chooses to filter all applications they can complete Application Filtering (Use Case 1.6).

Alternative Paths:

- **Auto-Reject Application:** In step 1, if the SAT, GRE, and GPA scores for the application are below the minimum threshold the system will give the option for the user to Auto-Reject the application.

- **Review Application:** In step 1, if the user has reviewing privileges on the application the system will give the option for the user to review the application.
- **Review Application - Faculty:** In step 1, if the user is a faculty level user who has been assigned to the application the system will give the option for the user to review the application.
- **Review Application - Administrator:** In step 1, if the user is an administrator level user, and had previously assigned the application to 3 (three) faculty level users who have completed reviewing the application and submitted the application back to the administrator level user then the system will give the option for the user to review the application.
- **Assign Application:** In step 1, if the user is an administrator level user the system will give the option for the user to assign the application to faculty level users.

Exception Paths: N/A

Extension Points: Alternative Path - Auto-Reject Application (Use Case 1.7), Alternative Path - Review Application - Faculty (Use Case 1.4), Alternative Path - Review Application - Administrator (Use Case 1.5), Alternative Path - Assign Application (Use Case 1.3)

Trigger: The user wants to access the application.

Assumptions: The application has already been created, and is accessible by the system. The user has access privileges on the application.

Precondition: The Create Application use case completed successfully, and user is either college or department level.

Postcondition: User accesses application and can proceed further.

Author: Krystal Lee

Date: March 15, 2016

1.3 Use Case Name: Assign Application

Iteration: Filled

Summary: An administrator level user assigns an application to a faculty level user.

Basic Course of Events:

1. The system gives to the user a list of faculty level users that can be assigned to review the application.
2. The user chooses one of the faculty level users.
3. The system asks the user to confirm their chosen faculty level user.
4. The user confirms their chosen faculty level user.
5. The system now allows the chosen faculty level user to review the application. In other words the faculty level user can now complete Review Application - Faculty (Use Case 1.4).
6. Complete Access Application (Use Case 1.2).

Alternative Paths:

- **Already Full:** In step 5, if the application already has three (3) faculty level users assigned to review the application the system will skip to step 6.
- **Cancel:** In step 4, the user can cancel and go straight to step 6.

Exception Paths: N/A

Extension Points: N/A

Trigger: The user wants to assign a faculty level user to review the application.

Assumptions: The application has already been created, and is accessible by the system. The user has assigning privileges to the application.

Precondition: The Access Application use case completed successfully, and user is an administrator level user.

Postcondition: A faculty level user is assigned to the application. The assigning administrator level user is returned to Access Application (Use Case 1.2).

Author: Krystal Lee

Date: March 15, 2016

1.4 Use Case Name: Review Application - Faculty

Iteration: Filled

Summary: A faculty level user reviews an undergraduate application, and submits it.

Basic Course of Events:

1. The system gives to the user options for editing the application score criteria, comment, and recommendation.
2. The system gives to the user an option for submitting the application.
3. The user edits the application scores for GPA, extracurricular activities, recommendations, ACT/SAT, and essays.
4. The system asks the user to confirm their score criteria changes.
5. The user confirms their score criteria changes, and the system updates the application information by adding the criteria for a total application score.
6. The system gives to the user an option for choosing an application recommendation from “Accept”, “Reject”, and “Waitlist”.
7. The user chooses an application recommendation.
8. The system asks the user to confirm their recommendation.
9. The user confirms their recommendation, and the system updates the application information.
10. The system gives to the user an option for adding a comment.
11. The user adds a comment.
12. The system asks the user to confirm their comment.
13. The user confirms their comment, and the system updates the application information.
14. The user submits the application.
15. Complete Access Application (Use Case 1.2).

Alternative Paths:

- **Cancel:** In steps 2-4, 6-8, and 10-12 the user can cancel and go straight to step 15.
- **Invalid:** In steps 2-9 if the user tries to submit the application without filling out the score or recommendation fields the system will go back to step 1.
- **Invalid Score:** In steps 3-5 if the user tries to edit the application score to be below 0 (zero) or above 100 (hundred) the system will go back to step 2.

Exception Paths: N/A

Extension Points: N/A

Trigger: The user wants to review the application.

Assumptions: The undergraduate application has already been created, and is accessible by the system. The user has reviewing privileges to the application.

Precondition: The Access Application use case completed successfully, and user is faculty level user.

Postcondition: The undergraduate application is updated with the user review. The reviewing faculty level user is returned to Access Application (Use Case 1.2)

Author: Krystal Lee

Date: March 22, 2016

1.5 Use Case Name: Review Application - Administrator

Iteration: Filled

Summary: An administrator level user reviews the application by collating scores and taking majority vote on recommendations. Then the user submits it to a college level user.

Basic Course of Events:

1. The system gives to the user options for collating the application scores, taking majority vote on recommendations, and adding a comment.
2. The system gives to the user an option for submitting the application.
3. The user chooses to collate the application scores.
4. The system takes the average of the scores provided by the 3 (three) faculty level users not including any scores that have a value of 0 (zero), and updates the application information so that is the only score.
5. The user chooses to take majority vote on recommendations.
6. The system takes the recommendations provided by the 3 (three) faculty level users, and takes the majority recommendation. The system then updates the application information so that the majority is the only recommendation.
7. The system gives the user an option for adding a comment.
8. The user adds a comment.
9. The system asks the user to confirm their comment.
10. The user confirms the comment, and the system updates the application information.
11. The user submits the application.
12. Complete Access Application (Use Case 1.2)

Alternative Paths:

- **Cancel:** In steps 2-10 the user can cancel and go straight to step 12.
- **Invalid:** In steps 2-6 if the user tries to submit the application without collating the scores or taking majority on recommendation the system will go back to step 1.

Exception Paths: N/A

Extension Points: N/A

Trigger: The user wants to review the application.

Assumptions: The application has already been created, and is accessible by the system. The application has previously been assigned to 3 (three) faculty level users who have completed the reviewing the application, and submitted it back to the user who is the assigning applicant level user.

Precondition: The Access Application use case completed successfully. The user is an administrator level user who has previously successfully completed Assign Application use case 3 (three) times.

Postcondition: The application is updated with the user review. The reviewing administrator level user is returned to Access Application (Use Case 1.2)

Author: Krystal Lee

Date: March 15, 2016

1.6 Use Case Name: Application Filtering

Iteration: Filled

Summary: A user filters the applications.

Basic Course of Events:

1. The system gives to the user an option for choosing a filtering criteria from a list of criterias. The criterias being application's number, status, name, submission date, and department.
2. The user chooses a filtering criteria.
3. The system gives to the user the option to choose another filtering criteria, or to filter the applications.
4. The user chooses to filter the applications.
5. The system conducts a logic operation on the application information.
6. The system gives to the user all applications that are qualified for the criteria, and the chosen filtering criteria(s).
7. Complete Access Application (Use Case 1.2).

Alternative Paths:

- **Multiple Filters:** In step 3 if the user chooses to add another filtering criteria the system will go through steps 1-3 again.
- **Cancel:** In steps 1-3 the user can cancel and go straight to step 7.

Exception Paths: N/A

Extension Points: N/A

Trigger: The user wants to filter applications.

Assumptions: All applications are accessible by the system.

Precondition: The Access Application use case completed successfully, and user is college or department level user.

Postcondition: Only qualified application are given to the user. The user is then returned to Access Application (Use Case 1.2)

Author: Zixiang Ma and Krystal Lee

Date: March 15, 2016

1.7 Use Case Name: Auto-Reject Application

Iteration: Filled

Summary: A user auto-rejects a low scoring application.

Basic Course of Events:

1. The system asks the user to confirm to auto-reject the application.
2. The user confirms.
3. The system changes the application recommendation to "Reject".
4. The system changes the application score to the default value of 0 (zero).

5. The system submits the application back to the assigning administrator level user.
6. Complete Access Application (Use Case 1.2).

Alternative Paths:

- **Cancel:** In step 1-2 the user can cancel and go straight to step 6.

Exception Paths: N/A**Extension Points:** N/A

Trigger: The user wants to Auto-Reject the application.

Assumptions: The application has already been created, and is accessible by the system. The user has reviewing privileges to the application.

Precondition: The Access Application use case completed successfully, and user is faculty level user.

Postcondition: The application is updated to be Auto-Rejected, and submitted back to the assigning administrator level user. The faculty level user is returned to Access Application (Use Case 1.2)

Author: Krystal Lee

Date: March 15, 2016

1.8 Use Case Name: Make Application Decision

Iteration: Filled

Summary: A college level user changes the application status from undecided to accepted, rejected, or waitlisted. The system notifies the applicant level user.

Basic Course of Events:

1. The system gives to the college level user the application including application recommendation.
2. The college level user changes the application status to match the application recommendation.
3. The system asks the college level user to confirm the change in application status.
4. The college level user confirms the change in application status, and the system stores the information.
5. The system messages the applicant level user associated with the application using an e-mail service.
6. If the application status change is to rejected the system will delete the application and application data from the shared database.

Alternative Paths:

- **Not Recommended:** In Step 2, the user can change the application status to not match the application recommendation before continuing.
- **Make Final Decision:** In Step 6, if the application status change is to accept, the applicant level user can complete Make Final Decision (Use Case 1.9).
- **Waitlist Application:** In Step 6, if the application status change is to waitlist, the system will complete Waitlist Application (Use Case 1.10).

Exception Paths:

- **Cancel:** In step 3, the user can cancel and the system will exit the use case.

Extension Points: Alternative Path - Make Final Decision (Use Case 1.9), Alternative Path - Waitlist Application (Use Case 1.10)

Trigger: A college level user wants to make a decision to accept an applicant or not.

Assumptions: The application data is stored in the shared database accessible by the system. The application has gone through the review process, and has a score and recommendation.

Precondition: The system is available, and has access to application. The user is a college level user accessing the application.

Postcondition: The application status is changed from undecided to accepted, rejected, or waitlisted. The applicant level user is notified of this change.

Author: Qi Wu and Krystal Lee

Date: March 15, 2016

1.9 Use Case Name: Make Final Decision

Iteration: Filled

Summary: An applicant level user responds to being accepted.

Basic Course of Events:

1. The system gives to the user their application with application status accepted.
2. The system gives to the user the option to change the application status to confirmed or rejected.
3. The user chooses to change the status to confirmed.
4. The system asks the user to confirm the change in application status.
5. The user confirms the change in application status, and the system stores the information.

Alternative Paths:

- **Multiple Confirms:** In step 5, if the applicant level user already has an application with an application status of confirmed the system will then change the application status of the already confirmed application to accepted before continuing.
- **Reject Accept:** In step 3, if the user choose to change the application status to rejected the system will delete the application and application data from the shared database.

Exception Paths:

- **Cancel:** In step 2-4, the user can cancel and the system will exit the use case.

Extension Points: N/A

Trigger: Applicant level user's application status changes to accepted, and they want to confirm or reject.

Assumptions: The application is stored in the shared database accessible by the system. The application has gone through the review process, and has an application status of accepted.

Precondition: The system is available, and has access to application. The user is an applicant level user accessing the application.

Postcondition: The application final decision is confirmed.

Author: Qi Wu and Krystal Lee

Date: March 15, 2016

1.10 Use Case Name: Waitlist Application

Iteration: Filled

Summary: The system adds an application to the waiting list.

Basic Course of Events:

1. The system obtains the desired department of the application.
2. The system obtains whether the application is for undergraduate, graduate, or professional status.

3. The system obtains the waiting list for the matching department and undergraduate/graduate/professional status.
4. The system obtains the score of the application.
5. The system adds the application to the waiting list by checking the application score against the scores of applications currently in the waiting list, and putting it in decreasing order.
6. The system exits use case.

Alternative Paths:

- **Multiple Score:** In step 5, if the application has the same score as another application the system will add the application beneath the last application with the same score.

Exception Paths: N/A**Extension Points:** N/A**Trigger:** Application status changed to waitlisted.**Assumptions:** All applications have been received. The application is stored in the shared database accessible by the system. The application has gone through the review process. Waitlists are ordered in decreasing order by score.**Precondition:** The system is available, and has access to the application. The application has an application status of waitlisted.**Postcondition:** The application is added to the appropriate waiting list.**Author:** Zixiang Ma and Krystal Lee**Date:** March 15, 2016