**USE CASE MODEL**

Tutor Application

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**Table of Contents:**

**Models:**

Diagram 1

Diagram 2

**Diagram 1 use cases:**

1. Private message
2. Log In
3. Verify Password
4. Display Error Message
5. Create Profile
   1. Create Student Profile
   2. Create Tutor Profile
6. Search Tutors
7. Choose Transaction
8. Make Payment
9. Direct Deposit
10. Apply to Tutor

**Diagram 2 use cases:**

1. Connect with other Tutees
2. Calendar
3. Schedule Comparison
4. Support Page
5. Tutor Resources
6. View profile
   1. View Student Profile
   2. View Tutors Profile

**DIAGRAM 1:**

**Diagram

Description automatically generated**

**DIAGRAM 2:**

**A picture containing diagram

Description automatically generated**

**Diagram 1 Use Cases**

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| --- | --- | --- | --- |
| **Title:** | **Send Private Message** | | |
| **Description**: | Enables users to message each other in private. | | |
| **Use Case ID** | 00 | | |
| **Related User Story ID’s** | 2 | | |
| **System Under Design:** | Tutor Application | | |
| **Primary Actor**: | General User | | |
| **Participants**: | None | | |
| **Goal**: | Users expect to send a message to another user, and see messages sent by other users. | | |
| **Following Use Cases**: | None | | |
| **Invariant**: | None | | |
| **Precondition**: | Users must have created a profile to be able to private message. | | |
| **Success Postcondition**: | Message is delivered/received. | | |
| **ACTOR**:  1. User A opens User B’s profile and clicks the private message icon on their profile  3. User A enters their message.  4. User A presses the deliver message button.  8. User B clicks / taps the icon and opens the message. | | **SYSTEM RESPONSES**  2. System opens a chat window between both users.  5. System encrypts the plaintext to ciphertext entered and sends it to user B.  6. System decrypts the ciphertext back to plaintext once user B receives the message.  7. System notifies user B through a pop up icon. |  |

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| **Title:** | **Log In** |
| **Description**: | The steps of logging into the tutor application |
| **Use Case ID** | 01 |
| **Related User Story ID’s** | 0 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | General User |
| **Participants**: | None |
| **Goal**: | Log user in successfully |
| **Following Use Cases**: | Verify Password (include), Display Error (extend) |
| **Invariant**: | None |
| **Precondition**: | System displays log in button. |
| **Success Postcondition**: | User is logged in |

**Main Success Path**

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| **ACTOR:**  1)User clicks log in button.  3)User enters username and password and presses Submit button. | **SYSTEM RESPONSES:**  2) System displays log in screen.  4) System verifies password (<<include>> relationship). |

**Exception Path**

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| **ACTOR:**  1)user Enters Password  4) Use sees Application user home screen | **SYSTEM RESPONSES:**  2) System verifies password  3) Password is not verified, <<exception>> display error triggered |

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| --- | --- |
| **Title:** | **Verify password** |
| **Description**: | System verified username and password to be correct or incorrect |
| **Use Case ID** | 02 |
| **Related User Story ID’s** | 0 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User |
| **Participants**: |  |
| **Goal**: | Verify that the user entered valid username and password |
| **Following Use Cases**: | Include of Login |
| **Invariant**: |  |
| **Precondition**: | Log in use case |
| **Success Postcondition**: | Application user home screen is displayed |

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| --- | --- |
| **ACTOR:**  1)User clicks log in button.  5) User sees application home screen | **SYSTEM RESPONSES:**  2) System processes user input for username and password  3) System validates username and password  4) if correct, System displays Application user home screen |

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| --- | --- |
| **Title:** | **Display error message** |
| **Description**: | An error message is displayed to the user |
| **Use Case ID** | 03 |
| **Related User Story ID’s** | 0 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User |
| **Participants**: |  |
| **Goal**: | Indicate to user that their password is incorrect |
| **Following Use Cases**: | Extend of login |
| **Invariant**: |  |
| **Precondition**: | Log in use case |
| **Success Postcondition**: |  |

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| **ACTOR:**  3)User sees error message | **SYSTEM RESPONSES:**  1)System can not verify username and password  2) System displays error message |

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| **Title:** | **Create Profile** |
| **Description**: | Enables all users to choose between creating a student profile, or tutor profile. |
| **Use Case ID** | 04 |
| **Related User Story ID’s** | 13, 21 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | General User |
| **Participants**: | None |
| **Goal**: | Users expect to create their own profile based on their role within the app. |
| **Following Use Cases**: | Create Student Profile (specification) , Create Tutor Profile (specification) |
| **Invariant**: | None |
| **Precondition**: | User must be logged in to create a profile. |
| **Success Postcondition**: | Profile has been created. |

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| **ACTOR:**  1. User clicks / taps the ‘Create Profile’ button on their menu  3. User chooses between the two options.  4. User completes the required information for their chosen profile. | **SYSTEM RESPONSES:**  2. System shows to the user two options: ‘Create student profile’, ‘Create tutor profile’  5. If the create student profile, or create tutor profile is successful, the new profile is saved.  6. If the Create Student Profile, or Create Tutor Profile is unsuccessful, the profile is discarded. |

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| **Title:** | **Create Student Profile** |
| **Description**: | All UMaine students are able to create a student profile. |
| **Use Case ID** | 12 |
| **Related User Story ID’s** | 04.a |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | General User |
| **Participants**: | None |
| **Goal**: | Students of the University of Maine can enlist themselves as a student user within the app. |
| **Following Use Cases**: | None |
| **Invariant**: | None |
| **Precondition**: | User must be part of the University of Maine to create a student profile. |
| **Success Postcondition**: | All required information has been filled. |

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| **ACTOR**:  1. User clicks / taps the ‘Create student profile’ button  3. User enters their full name, student ID and email  4. User clicks/ taps the ‘Submit’ button | **SYSTEM RESPONSES**:  2. System opens a new window and asks the user to insert their full name, student ID and email  5. System checks whether the user is a student at the University of Maine based on the information submitted  6. If the user is a student at UMaine, then the system opens up a new window containing a form that the user needs to fill with their student profile details.  6.1. User fills in the rest of their profile  6.2. User clicks / taps the ‘Create profile’ button  6.3. System saves the user's information.  7. If the user is not verified to be a UMaine student:  7.1. System asks the user to insert their student information again (up to 3 tries), until they insert the correct information. |

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| **Title:** | **Create Tutor Profile** |
| **Description**: | All users who have been approved for tutoring are able to create a tutor profile. |
| **Use Case ID** | 04.b |
| **Related User Story ID’s** | 21 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | General User |
| **Participants**: | None |
| **Goal**: | Users who have been approved for tutoring are able to enlist themselves as a tutor user within the app. |
| **Following Use Cases**: | None |
| **Invariant**: | None |
| **Precondition**: | User must have been approved for tutoring to create a tutor profile. |
| **Success Postcondition**: | All required information has been filled. |

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| **ACTOR**:   1. User clicks / taps the ‘Create tutor profile’ button   3.2.2. User fills in the rest of their profile  3.2.3. User clicks / taps the ‘Create profile’ button | **SYSTEM RESPONSES:**  2. System checks whether the user has applied to become a tutor on this app.  3. If the user has applied to become a tutor:  3.1. System checks if their application is approved, declined, or under review.  3.2. If their application has been approved:  3.2.1. System opens up a new window containing a form that the user needs to fill in with their tutor profile details.  3.2.4. System saves the user's information.  3.3. If their application has been declined:  3.3.1 System notifies the user that they can’t create a tutor profile on this application.  3.4. If their application is under review:  3.4.1. System notifies the user to wait for the result of their application.  4. If the user has not applied to become a tutor:  5. System notifies the user to apply for a tutor first before creating a tutor profile. |

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| **Title:** | **Search Tutors** | |
| **Description**: | Enables student users to search for tutors by name or subject. | |
| **Use Case ID** | 05 | |
| **Related User Story ID’s** | 9 | |
| **System Under Design:** | Tutor App | |
| **Primary Actor**: | Student User | |
| **Participants**: | None | |
| **Goal**: | Users expect to have a list of tutors that matches their search criteria. | |
| **Following Use Cases**: | None | |
| **Invariant**: | None | |
| **Precondition**: | None | |
| **Success Postcondition**: | A successful match is found. | |
| **ACTOR:**  1. Student presses the ‘Search Tutor’ button in their menu.  3. Student clicks / taps ‘Search by name’ button.  3.2. Student enters their text in the search box.  3.3. Student clicks / taps the search button.  4. Student clicks / taps ‘Search by subject button’. | | **SYSTEM RESPONSES**  2. System shows the student two options to pick from: ‘Search by name’ , ‘Search by subject’.    3.1. System opens up a new search box.  3.4. System checks whether the name matches to any tutor profile.  3.5. System shows all the available tutor profiles (if any) that match that name.  4.1. System checks whether there is any subject with that name registered.  4.2. System shows all the available tutor profiles (if any) for that subject. |

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| **Title:** | **Choose Transaction** |
| **Description**: | Students users can make payment to tutor users |
| **Use Case ID** | 06 |
| **Related User Story ID’s** | 08 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User (student) |
| **Participants**: |  |
| **Goal**: | Successfully transfer money from student’s bank to tutor’s profile |
| **Following Use Cases**: | Transaction (specification), Make Payment (specification) |
| **Invariant**: |  |
| **Precondition**: | User clicks “Transaction Center” |
| **Success Postcondition**: |  |

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| **ACTOR:**  1)User clicks “Transaction Center”  3)User views transaction center and chooses what type of transaction to do | **SYSTEM RESPONSES:**  2)System displays Transaction Center  3)System responds to user decision (Use Case 07 or 08) |

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| --- | --- |
| **Title:** | **Make Payment** |
| **Description**: | Students users can make payment to tutor users |
| **Use Case ID** | 07 |
| **Related User Story ID’s** |  |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User (student) |
| **Participants**: |  |
| **Goal**: | Successfully transfer money from student’s bank to tutor’s profile |
| **Following Use Cases**: | Transaction (generalization) |
| **Invariant**: |  |
| **Precondition**: | User clicks “Transaction Center” and then “Make Payment” |
| **Success Postcondition**: |  |

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| --- | --- |
| **ACTOR:**  1)User clicks “Make Payment” button  4) User enters amount and destination (tutor)  6) User enters bank credentials or selects saved bank information | **SYSTEM RESPONSES:**  2) System displays make payment center  3) User prompts user for amount and destination  5) System prompts user for bank credentials  7) System requests withdrawal from bank  8) Payment receipt is shown and emailed to student and tutor |

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| **Title:** | **Direct Deposit** |
| **Description**: | Tutor can set up direct deposit for payments made from students to be deposited each week |
| **Use Case ID** | 08 |
| **Related User Story ID’s** | 24 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User (Tutor) |
| **Participants**: |  |
| **Goal**: | Move money from account on Tutor Application to tutor’s bank account |
| **Following Use Cases**: | Transaction (specification) |
| **Invariant**: |  |
| **Precondition**: | Have money in account to be transferred and be a tutor user |
| **Success Postcondition**: |  |

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| --- | --- |
| **ACTOR:**  1)User clicks “Enroll in Direct Deposit” button  4) User enters bank credentials  7)User sees direct deposit information confirmation | **SYSTEM RESPONSES:**  2)System verifies that user is a tutor and has a positive balance in the application  3) System prompts user for bank credentials  5) System processes bank credentials  6)System enables entire balance to be deposited every 2 weeks on Sunday  7) System displays direct deposit information to user |

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| **Title:** | **Apply to Tutor** |
| **Description**: | Prospective tutors can apply through the application to be able to create a tutor profile and use the application. |
| **Use Case ID** | 09 |
| **Related User Story ID’s** | 16 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: |  |
| **Participants**: |  |
| **Goal**: | User submits tutor application |
| **Following Use Cases**: | Create Tutor Profile (extend, 04.b) |
| **Invariant**: |  |
| **Precondition**: | User clicks “Apply to Tutor” |
| **Success Postcondition**: |  |

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| --- | --- |
| **ACTOR:**  1)User clicks “Apply to Tutor”  3)User fills out questions  6)User views confirmation that their application has been submitted. | **SYSTEM RESPONSES:**  2)System prompts user to fill out application questions  4)System processes user input and submits application to manager account and to be reviewed application stack  5)System confirms with user their application has been submitted. |

**Diagram 2 Use Cases**

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| --- | --- |
| **Title:** | **Connect with other Tutees** |
| **Description**: | Allows Tutees to interact with other tutees |
| **Use Case ID** | 10 |
| **Related User Story ID’s** | 10 |
| **System Under Design:** | Tutor App |
| **Primary Actor**: | Student user |
| **Participants**: | None |
| **Goal**: | Allow Students to connect and contact other students |
| **Following Use Cases**: | None |
| **Invariant**: | None |
| **Precondition**: | User must be a student.  User must have a profile. |
| **Success Postcondition**: | User is able to message and view other students’ profiles |

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| --- | --- |
| **ACTOR**:    1.Student user clicks/taps search option  2.Student searches for other students  4.Student is able to click to view another student’s profile or send them a message. | **SYSTEM RESPONSES**:  3.System displays the results for the search.  4.System displays any information requested or sends the messages if the user requests. |

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| **Title:** | **Calendar** |
| **Description**: | Calendar for user to indicate when they are available to tutor or be tutored |
| **Use Case ID** | 11 |
| **Related User Story ID’s** | 36 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User (Tutor and Student) |
| **Participants**: |  |
| **Goal**: | Have a schedule to be compared with other users |
| **Following Use Cases**: | Schedule compare (extend, 12) |
| **Invariant**: |  |
| **Precondition**: | User clicks “Edit Calendar” |
| **Success Postcondition**: |  |

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| --- | --- |
| **ACTOR:**  1)User clicks “Edit Calendar”  3)User responds to system prompts  7)User clicks “Save Changes”  9)User views confirmation screen | **SYSTEM RESPONSES:**  2)System prompts user for day and time that there are available  4)System adds and saves time to user’s calendar  6)System repeats 2-4 until User clicks “Save Changes” button  8)System provides user with confirmation that their calendar is updated |

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| --- | --- |
| **Title:** | **Schedule Comparison** |
| **Description**: | Allows students and tutors to compare schedules |
| **Use Case ID** | 12 |
| **Related User Story ID’s** | 21 |
| **System Under Design:** | Tutor App |
| **Primary Actor**: | Student user, Tutor user |
| **Participants**: | None |
| **Goal**: | Allow Students and Tutor users to compare schedules with each other to plan meetings |
| **Following Use Cases**: | None |
| **Invariant**: | None |
| **Precondition**: | User must be a student or a tutor.  User must have a profile. |
| **Success Postcondition**: | User can see another user’s schedule and it able to see them side by side with their own |

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| --- | --- |
| **ACTOR:**  1.User clicks/taps calendar  3.User can view their own schedule and add/delete events.  5.User clicks on compare schedule and inputs the other users name. | **SYSTEM RESPONSES:**  2.System displays calendar.  4.Sysem saves changes and displays any edits.  6.System displays the selected users calendar next to the original users’ calendar. |

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| **Title:** | **Support Page** |
| **Description**: | Allows users to access a support page with resources for help with the service and contact information |
| **Use Case ID** | 13 |
| **Related User Story ID’s** | 4 |
| **System Under Design:** | Tutor App |
| **Primary Actor**: | All users |
| **Participants**: | None |
| **Goal**: | Allows users to seek help from the system about features or any questions |
| **Following Use Cases**: | None |
| **Invariant**: | None |
| **Precondition**: | User must be a registered user |
| **Success Postcondition**: | User is able to access a support page when needed for help |

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| **ACTOR**:    1.User clicks/taps support  3.User can view the support page | **SYSTEM RESPONSES:**  1.System displays page with resources for support (contact info Q&A etc) |

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| **Title:** | **Tutor Resources** |
| **Description**: | A place for tutors to see all of their resources (materials they made for tutoring) |
| **Use Case ID** | 14 |
| **Related User Story ID’s** | 29 |
| **System Under Design:** | Tutor App |
| **Primary Actor**: | Tutor user |
| **Participants**: | None |
| **Goal**: | To have a space for Tutors to store their materials for tutoring |
| **Following Use Cases**: | None |
| **Invariant**: | None |
| **Precondition**: | Must be a Tutor |
| **Success Postcondition**: | Tutor is able to see a page for all of their materials (notes, practice problems, etc…) |

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| **ACTOR:**  1)User clicks the tab for Tutor Resources  3)User is able to see an organized page with different sections for different material (notes, practice problems…)  4) User is able to click upload to upload files they want to store  6) User can view the resources they have uploaded | **SYSTEM RESPONSES:**  2) System displays the page for tutor resources  5) System takes the files and stores them |

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| **Title:** | **View Profile** |
| **Description**: | Allows a user to view another user’s profile |
| **Use Case ID** | 15 |
| **Related User Story ID’s** | 13, 21 |
| **System Under Design:** | Tutor App |
| **Primary Actor**: | General User |
| **Participants**: | None |
| **Goal**: | To have a feature that lets users view other users’ profiles |
| **Following Use Cases**: | View Student Profile (generalization, 15.a), View Tutors Profile (generalization, 15.b) |
| **Invariant**: | None |
| **Precondition**: | Must be a General User |
| **Success Postcondition**: | User can view another user’s profile |

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| **ACTOR:**  1)User clicks on another Users Profile (Icon or Name, however we decide to display other accounts) | **SYSTEM RESPONSES:**  **2**) System displays that user’s information |

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| --- | --- |
| **Title:** | **View Student Profile** |
| **Description**: | Users can view student profiles |
| **Use Case ID** | 15.a |
| **Related User Story ID’s** | 21 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User |
| **Participants**: |  |
| **Goal**: | show information about student to user |
| **Following Use Cases**: | View Profile (specification, 15) |
| **Invariant**: |  |
| **Precondition**: | User clicks on student’s profile button |
| **Success Postcondition**: |  |

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| --- | --- |
| **ACTOR:**  1)User clicks on student’s profile button  4)User sees student profile display | **SYSTEM RESPONSES:**  2)System checks if user has permissions to view the student’s information  3)System displays student profile as customized by student |

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| --- | --- |
| **Title:** | **View Tutor Profile** |
| **Description**: | User can view tutor profile |
| **Use Case ID** | 15.b |
| **Related User Story ID’s** | 13 |
| **System Under Design:** | Tutor Application |
| **Primary Actor**: | User |
| **Participants**: |  |
| **Goal**: | Show information about tutor to user |
| **Following Use Cases**: | View Profile (specification, 15) |
| **Invariant**: |  |
| **Precondition**: | User clicks tutor’s profile button |
| **Success Postcondition**: |  |

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| --- | --- |
| **ACTOR:**  1)User clicks tutor’s profile button  4)User sees tutor profile display | **SYSTEM RESPONSES:**  2)System checks if user has permissions to view the tutor’s information  3)System displays student profile as customized by the tutor |