Use Case –

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| **Name** | Math video game |
| **Description** | Students register for and play a math video game to prepare them for middle school classes. |
| **Actors** | Students |
| **Triggers** | Student clicks to log in. |
| **Preconditions** | Student decides to register for and play the game. |
| **Postconditions** | The student can log in and play whenever they like.  Progress saved to server |
| **Main Course** | 1. Student clicks “log in” on main page.  2. Student enters username and password.  3. System takes the student to the game page.  4. Student plays game by answering math questions. |
| **Alternate Courses** | AC1 Student has not yet registered.  1. Student clicks “register” on main page.  2. Student chooses username and password, enters their parent’s email, the school they attend, and their teacher on the registration page.  3. Confirmation email is sent to parent’s email and parent confirms registration.  4. Return to Main Course step 1. |
| **Exceptions** | EX1 System fails to save student registration  1. System notifies user of error.  2. Return user to Main Course step 1.  EX2 Registration was not renewed after the first free year.  1. Student account is Frozen  2. Student can't log-in.  3. Renewal email is resent to parent.  4. Return user to Main Course step 1. |

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| Name | Math Video Game |
| Description | Teachers can log in to track the progress of the student |
| Actors | Teachers |
| Triggers | Teacher clicks to log in. |
| Preconditions | Teacher wants their class to participate in game. |
| Postconditions | Teacher can log in to donate.  Teacher submits new problems.  Teacher tracks student progress. |
| Main Course | MC1 Teacher wants to log in.  1. Teacher clicks “log in” on main page.  2. Teacher enters login information.  3. Teacher can click either track my student or submit new problem.  4. Teacher can track the student’s progress.  5. Teacher can submit new math problems for admin approval. |
| Alternative Courses | AC1 Teacher wants to log in to make donation.  1. Teacher clicks “Donate” on main page.  3. Teacher can click either payment option  4. Teacher can enter payment information for donations for their student's school. |
| Exceptions | EX1 Payment failure.  1. User is notified that payment failed or could not be processed.  2. User is prompted to re-enter payment information. |

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| Name | Math Video Game |
| Description | Parents can log in to track the progress of the student and/or make Payments/Donations. |
| Actors | Parent |
| Triggers | User clicks as desired |
| Preconditions | Parent’s child registers for game. |
| Postconditions | The parent can log in to donate or make payments.  Parent tracks student’s progress. |
| Main Course | MC1 Parent wants to log in to make payment.  1. Parent clicks “log in” on main page.  2. Parent enters login information.  3. Parent can click either payment  4. Parent can enter payment information for payments for their child’s school. |
| Alternative Courses | AC1 Parent wants to log in to make donation.  1. Parent clicks “Donate” on main page.  2. Parent can click either payment option  3. Parent can enter payment information for donations for their child’s school.  AC2 A Parent wants to track student progress  1. User clicks “Log in” on the main page.  2. Parent may then select “Student Progress”  3. Parent can see the progress of their child |
| Exceptions | EX1 Payment failure.  1. User is notified that payment failed or could not be processed.  2. User is prompted to re-enter payment information. |

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| Name | Math Video Game |
| Description | Admin can login and manage the website and payments. |
| Actors | Admin |
| Triggers | User clicks as desired |
| Preconditions | Website and game are created. |
| Postconditions | Admin may manage payments, user information, and approve teacher submitted problems. |
| Main Course | MC1 Admin wants to manage payments.  1. Admin clicks “log in” on main page.  2. Admin enters login information.  3. Admin can manage the payments |
| Alternative Courses | AC1 Admin wants to log in to make donation.  1. Admin clicks “Donate” on main page.  3. Admin can click either payment option  4. Admin can enter payment information for donations for the school of their choice.  AC2. Admin reviews teacher submitted problems.  1. Admin looks over all problems submitted by teachers.  2. Admin either approves problems and they are added to the game, or rejects problems. |
| Exceptions | EX1 Payment failure.  1. User is notified that payment failed or could not be processed.  2. User is prompted to re-enter payment information. |