Project Escape the Syllabus

JDC-8328

Minimum Viable Project Feature Mapping;

User Stories and Acceptance Criteria

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A *successful solution would be* creating a mobile app available for Android and IOS that engages the students with enjoyable content while also providing information relevant to the class. The game would test over syllabus information at first, and then go on to test over specific learning objectives for the class.

The minimum viable product (MVP) embodies an application's minimum marketable features (MMF) (In the grid, these features are prioritized from left to right). Each feature is a result of its processes (Again, prioritized left to right under each feature). Alternative implementations of each process are listed and prioritized according to the possibility of implementation in the MVP.

- In scope priority means that an alternative will be included.
- Stretch goals may be implemented if things go well.
- Future work priority means that we are sure we will not get to it in the MVP.

Each alternative is described from the end-user's perspective by a user story. The "in scope" and "stretch goals" alternatives are further described by acceptance criteria scenarios which demonstrate what happens when a user story has been successfully implemented. These criteria will serve as the benchmarks of a properly implemented application.

I. Minimum Marketable Feature (I) - *Start Game*

A. Process (A) - *Register User*

1. Custom ID and Password (In Scope)
    a) As a student, I want to be able to register for escape the syllabus with a custom ID and password so I can play the game.
    b) Given the student is not already registered, when they provide legal characters for their username and password, then their account will be created and stored in the database.
    c) Given the student is already registered, when they enter an ID that has already been claimed, they will be notified that an account already exists.
    d) Given the student is on the registration page, when they enter in invalid characters for the ID or password they will be notified of the legal characters.
2. School Portal Registration (Stretch Goal)
    a) As a student, I want to register for Escape the Syllabus using my school account/login, so that I can play the game with my person school identity.
    b) Given the student is not registered, when they register with a valid school ID and password, their account will be stored and linked to their name in the database.
    c) Given the students school account has already been registered, when they try to register the account again with a different or new password, then they will be notified that their school account has already been registered for the app.
    d) Given the student is on the registration page, when they enter in the wrong credentials for their school portal, then they will be notified that their account registration and link to the app has failed.
3. Register with Google (Future Work)
    a) As a student, I want to be able to register for escape the syllabus with my existing Google credentials so I can play the game.
    b) Given the student is not registered, when they register with their Google account, their account will be created and stored in the database.

c) Given the student is on the registration page, when the google account given has already been registered, then the student will be notified that their account has already been registered.
d) Given the student is on the registration page, when the student enters in an invalid log in for a google account, then they will be notified that their username / password was incorrect.

4. Register with Facebook (Future Work)
    a) As a student, I want to be able to register for escape the syllabus with my existing Facebook credentials so I can play the game.
    b) Given the student is not registered, when they register with their Facebook account, their account will be created and stored in the database.
    c) Given the student is on the registration page, when they try and register with a Facebook account that has already been registered, then they will be notified that this account has already been claimed.
    d) Given the student is on the registration page, when they give invalid log in for a Facebook account, they will be notified that their registration failed due to an invalid Facebook login.

B. Process (B) - *Login*
    1. Custom ID and Password (In Scope)
        a) As a student, I want to log in with my own ID and password, so that I can play the game with my saved data.
        b) Given the user is registered, when they enter a correct user ID and password, then they will log in to their account and get access to their data.
        c) Given the user is on the login page, when they enter in an invalid username, then they will be notified that this username is not registered.
        d) Given the user is on the login page, when they enter in an invalid password for a valid username, then they will be notified that their password was incorrect.
    2. School Portal Login (Stretch Goal)
        a) As a user, I want to log in with my school ID and password, so that my school account is linked to my progress in the game.
        b) Given the user is registered, when they enter a valid school ID and password, then they will log in to their account which is linked to their school account.

c) Given the user is on the login page, when they enter in a valid school ID and password that is not registered, then they will be notified that their account is not registered.
d) Given the user is on the login page, when they enter in an invalid school username and password they will be notified that their login failed.

3. Login with Google (Future Work)
    a) As a student, I want to log in with my Google account, so that my Google account is linked to my progress in the game.
    b) Given the student is registered with their Google account, when they enter their Google login information, they will log in to their account within the game and access their data..
    c) Given the user is on the login page, when they enter in a valid Google account that has not been registered, then they will be notified that their google account is not registered with our app yet
    d) Given the user is on the login page, when they enter in an invalid Google login, then they will be notified that their Google login was unsuccessful.
4. Login with Facebook (Future Work)
    a) As a student, I want to log in with my Facebook account, so that my Google account is linked to my progress in the game.
    b) Given the student is registered with their Facebook account, when they enter their Facebook login information, they will log in to their account within the game and access their data.
    c) Given the user is on the login page, when they enter in a valid Facebook login that has not yet been registered, then they will be notified that their facebook account has not been registered with our app.
    d) Given the user is on the login page, when they enter in an invalid Facebook login, then they will be notified that the login has failed.

C. Process (C) - *Go to current level if registered/logged in*
1. Click start (In Scope)
    a) As a student, I want to continue the game from where I left off so I don't have to start from level one each time.
    b) Given a student has valid credentials and hasn't played the game before, when they click the start game button, then they will begin a new game at level 1.

c) Given a student has valid credentials and has played the game before, when they click the start game button, then they will be sent to their current level.

2. Select an unlocked level from a level select screen (Stretch Goal)
    a) As a student, I would like to determine the level I play on my own, so that I can review previous levels.
    b) Given the student has navigated to the level select screen, when they click on a certain level, then they will be loaded in to that level.
    c) Given the student is on the level select screen, when they click the back arrow, then they will be taken back to the home screen.

II. Minimum Marketable Feature (II) - *Levels*

A. Process (A) - *Questions on Weekly Topics*

1. Display a question with 4 answer choices (In Scope)
    a) As a student, I want to answer a question over a weekly topic so that I can advance through the level.
    b) Given a student is presented with a multiple choice question, when they choose the right answer, then they advance to the next question.
    c) Given the student is presented with a multiple choice question, when they choose an incorrect answer then they will be notified and receive a negative consequence in the game.
    d) Given a student has answered a question wrong too many times, when they answer the question wrong again, then they will have to restart the level.
2. Answer all questions correctly before advancing to the next level (In Scope)
    a) As a student, I want to answer all the questions correctly so that I can complete the level.
    b) Given a student has answered all the questions correctly, when they submit their final correct answer, they advance to the next level.
    c) Given a student didn't answer all the questions correctly, when they submit their final answer, they are sent to the beginning of the current level.

B. Process (B) - *Assignment over topic at end of each level*

1. Tests over material learned (In Scope)

a) As a professor, I want to be able to create tests for each level so I can see how well students are keeping up with the material.
b) Given the professor is logged in, when they click “Create Test”, then they will be able to submit questions for a level from a question bank.

2. Question bank (In Scope)
    a) As a professor, I want to be able to create a question bank.
    b) Given the professor is logged in and they clicked “Create Question Bank”, when they provide a name with valid characters, then a question bank of that name will be created.
    c) Given the professor is logged in and they clicked “Create Question Bank”, when they provide a name with invalid characters, then they will be asked to put in valid characters.
    d) Given the professor is logged in and created a question bank, when they click “Delete Question Bank”, then that question bank will be deleted.
    e) Given the professor is logged in and created a question bank, when they click “Add Question”, then they will provide a question along with four answer choices and it will be added to the question bank.
    f) Given the professor is logged in and created a question bank, when they click “Delete Question”, then the question will be deleted from the question bank.
3. Randomize questions (Stretch Goal)
    a) As a professor, I want to be able to create a randomized set of questions from the question bank.
    b) Given the professor is logged in, when the question bank they click on isn’t empty, then they will be able to generate random sets of questions.
    c) Given the professor is logged in, when the question bank they click on is empty, then they will receive an error and be asked to add questions to the question bank.

III. Minimum Marketable Feature (III) - *Track Student Progress*

A. Process (A) - *Display Score*

1. Display level scores to students (In Scope)
    a) As a student, I want to be able to view a list of my scores on levels and other assignments, so that I can track my own progress throughout the class

b) Given the student is logged in, when they click “Show Scores,” they will be able to see a list of scores for each level they have completed.
c) Given the student is logged in, when they click “Show Scores” but have not completed any levels, then they will be notified that they have no scores to be displayed

2. Display all students scores to professor (In Scope)
    a) As a professor, I want to be able to view my students scores on each level and assignment, so that I can get a feeling of how well my class understands the material
    b) Given a professor is successfully logged in, when they click “See students scores” for a specific level, then they will be directed to a screen with a list of all the students scores
3. Display a particular students scores to the professor (Stretch Goal)
    a) As a professor, I want to be able to view and individual students scores on every level, so that I can track individual student progress
    b) Given a professor is viewing the list of students in the app for their class, when they click on a student from their class list, then they will be taken to a screen which shows that students performance on every level
    c) Given a professor is already viewing an individual students scores, when they click the back arrow, then they will be taken back to the list of students in their class
4. Display score trends (Stretch Goal)
    a) As a professor, I want to be able to view the average score for each level, so that I can see which topic or assignment needs the most attention.
    b) Given the professor is logged in, when they click on “display average score,” they will be able to see the average score for each level/topic.

B. Process (B) - *Show Levels*
    1. List of levels completed (In Scope)
        a) As a student, I want to see a list of completed levels, so that I can review previous topics.
        b) Given the student is successfully logged in, when they click “Show Levels”, they will see a list of all levels with completed ones labeled “Complete”.

2. List of levels that are incomplete (In Scope)
    a) As a student, I want to see a list of incomplete levels, so that I can see how many levels I need to complete.
    b) Given the student is successfully logged in, when they click “Show Levels”, they will see a list of all levels with incomplete ones labeled “Incomplete”.
3. Access to previous levels (Stretch Goal)
    a) As a student, I want to be able to go back to previous levels, so that I can review the topics.
    b) Given the student is successfully logged in, when they click on a previous level, they will be able to replay that level.
4. Show how much (%) of a certain level was completed (Future Work)
    a) As a student, I want to be able to see how much of a level I completed, so that I can see what percentage is left to do.
    b) Given the student is successfully logged in, when they click “Show Levels”, they will see a percentage completed next to each level.