

		<b>Project Title:</b> Aviation Index	
		<b>Version:</b> 2.3	
<b>ID</b>	<b>User Story ID</b>	<b>Requirement</b>	<b>Justification</b>
1.1.1	1.1	Home page must load at GET /	Users must be able to learn about the site
1.1.2	1.1	Home page must load for any user	Home page must be public
1.2.1	1.2	Home link must go to GET /	Users must be able to navigate site
1.2.2	1.2	Topics link must go to GET /topics	Users must be able to navigate site
1.2.3	1.2	Questions link must go to GET /questions	Users must be able to navigate site
1.2.4	1.2	Study link must go to GET /study	Users must be able to navigate site
1.2.5	1.2	Reports link must go to GET /reports	Users must be able to navigate site
1.2.6	1.2	Profile link must go to GET /profile	Users must be able to navigate site
1.2.7	1.2	Login link must go to GET /login	Users must be able to navigate site
1.2.8	1.2	Topics, Questions, Study, Reports, Profile, and Logout links must be visible for authenticated users	Authenticated links must be visible for authenticated users
2.1.1	2.1	Register page must load at GET /register	Users must be able to register an account
2.1.2	2.1	Register page must load for any user	Register page must be public
2.1.3	2.1	Users must be able to enter their username	Users must be able to register an account
2.1.4	2.1	Usernames must be unique	Users must be uniquely identified by their username
2.1.5	2.1	Usernames must be at least 8 characters long	Users must be securely identified by their username
2.2.1	2.2	Users must be able to enter their password	Users must be securely authenticated
2.2.2	2.2	Passwords must be at least 8 characters long	Users must be securely authenticated
2.2.3	2.2	Users must be required to confirm their password	Users must be securely authenticated
2.3.1	2.3	Users must be able to submit their new credentials for storage	Users must be able to register an account
2.3.2	2.3	New users must be assigned the role USER	Users must be able to register an account
2.3.3	2.3	A message must be shown if the passwords do not match	Users must be notified if their entered passwords do not match
2.3.4	2.3	A message must be shown if the password is invalid	Users must be notified if their entered password is invalid
2.4.1	2.4	Passwords must be encrypted before storage	Users must be securely authenticated
3.1.1	3.1	Login page must load at GET /login	Users must be able to authenticate themselves
3.1.2	3.1	Login page must load for any user	Login page must be public
3.1.3	3.1	Users must be able to enter their username	Users must be able to authenticate themselves
3.2.1	3.2	Users must be able to enter their password	Users must be able to authenticate themselves
3.2.2	3.2	Password data should be hidden when typed	Users must be able to authenticate themselves
3.3.1	3.3	Users must be able to submit their credentials for authentication	Users must be able to authenticate themselves
3.3.2	3.3	A message must be shown if the username or password is invalid	Users must be notified if they are not authenticated
3.3.3	3.3	Users must be redirected to the home page after authentication	Users must be able to authenticate themselves
3.3.4	3.3	Users must be redirected to the login page if they attempt to access protected materials without authentication	Users must be able to authenticate themselves

3.4.1	3.4	Logout link must end session	Users must be able to end session
3.4.2	3.4	Users must be redirected to the home page after logging out	Users must be able to end session
4.1.1	4.1	Profile page must load at GET /users	Users must be able to view their profile
4.1.2	4.1	Profile page must load for authenticated users	Profile page should be visible to authenticated users
4.1.3	4.1	Profile page must display user's username	Users must be able to view their profile
4.1.4	4.1	Edit Profile page must load at GET /users/edit	Users must be able to edit thier profile
4.1.5	4.1	Edit Profile page must load for authenticated users	Edit Profile page should be visible to authenticated users
4.1.6	4.1	Users must be able to enter a new username	Users must be able to edit thier profile
4.1.7	4.1	Users must be able to save their new username	Users must be able to edit thier profile
4.1.8	4.1	A message must be shown if the new username is invalid	Users must be notified that their new username is invalid
4.1.9	4.1	Users must be redirected to the Profile page after updating their username	Users must be able to view their profile
4.2.1	4.2	Update Password page must load at GET /password	Users must be able to update their password
4.2.2	4.2	Update Password page must load for authenticated users	Update Password page should be visible to authenticated users
4.2.3	4.2	Users must be required to enter their old password	Users must be able to update their password
4.2.4	4.2	Users must be required to enter a new password twice that matches	Users must be able to update their password
4.2.5	4.2	Users must be able to save their new password	Users must be able to update their password
4.2.6	4.2	A message must be shown if the old password is incorrect	Users must be required to verify their old password to update it
4.2.7	4.2	A message must be shown if the passwords do not match	Users must be required to verify their old password to update it
4.2.7	4.2	A message must be shown if the new password is invalid	Users must be notified that their new password is invalid
4.2.8	4.2	Users must be redirected to the Profile page after updating their password	Users must be able to view their profile
4.3.1	4.3	Users must be able to delete their account	Users must be able to delete their account
4.3.2	4.3	Users must be redirected to the home page after deleting their account	Users must be able to delete their account
4.3.3	4.3	All associated UserQuestions must also be deleted after an account is deleted	Users must be able to delete their account
5.1.1	5.1	Topics page must display admin controls for topics for admins only	Topic write operations should only be accessible by admins
5.2.1	5.2	Add Topic page must load at GET /topics/new	Admins must be able to add new topics
5.2.2	5.2	Add Topic page must load for admins only	Add Topic page must be visible to admins only
5.2.3	5.2	Admins must be able to enter a new topic	Admins must be able to add new topics
5.2.4	5.2	Admins must be able to save the new topic	Admins must be able to add new topics
5.2.5	5.2	Admins must be redirected to the new topic page after it is created	Admins must be able to add new topics
5.3.1	5.3	Edit Topic page must load at GET /topics/edit/{id}	Admins must be able to edit topics
5.3.2	5.3	Edit Topic page must load for admins only	Edit Topic page must be visible to admins only
5.3.3	5.3	Admins must be able to enter a new topic	Admins must be able to edit topics
5.3.4	5.3	Admins must be able to save the new topic	Admins must be able to edit topics
5.3.5	5.3	Admins must be redirected to the updated topic page after it is updated	Admins must be able to edit topics
5.4.1	5.4	Admins must be able to delete topics	Admins must be able to delete topics
5.4.2	5.4	Admins must be redirected to parent topic page after a subtopic is deleted	Admins must be able to delete topics
5.4.3	5.4	Admins must be restricted from deleting a topic if it contains a subtopic or question	Admins must be restricted from deleting too much information at once
5.4.4	5.4	Users' study topic filter must be cleared when deleted if it matches the deleted topic	Users' study session should update with changes to topics
6.1.1	6.1	Topics page must display admin controls for questions for admins only	Question write operations should only be accessible by admins

6.2.1	6.2	Add Question page must load at GET /questions/new/topic/{id}	Admins must be able to add new questions
6.2.2	6.2	Add Question page must load for admins only	Add Question page must be visible to admins only
6.2.3	6.2	Admins must be able to enter a new question and answer	Admins must be able to add new questions
6.2.4	6.2	Admins must be able to save the new question	Admins must be able to add new questions
6.2.5	6.2	Admins must be redirected to the parent topic page after it is created	Admins must be able to add new questions
6.2.6	6.2	New questions must be assigned a global position when created	Users must be able to study new questions once they are created
6.2.7	6.2	New user questions for each user must be created to match new questions when they are created	Users must be able to study new questions once they are created
6.2.8	6.2	New user questions should be assigned a study status of 'NEW' when they are created	Users must be able to study new questions once they are created
6.3.1	6.3	Edit Question page must load at GET /questions/edit/{id}	Admins must be able to edit questions
6.3.2	6.3	Edit Question page must load for admins only	Edit Question page must be visible to admins only
6.3.3	6.3	Admins must be able to enter a new question or answer	Admins must be able to edit questions
6.3.4	6.3	Admins must be able to save the new question	Admins must be able to edit questions
6.3.5	6.3	Admins must be redirected to the parent topic page after it is updated	Admins must be able to edit questions
6.4.1	6.4	Admins must be able to delete questions	Admins must be able to delete questions
6.4.2	6.4	Admins must be redirected to parent topic page after a question is deleted	Admins must be able to delete questions
6.4.3	6.4	User's current study question must be advanced when deleted if they match the deleted question	Users' study session should update with changes to questions
6.4.4	6.4	Associated User Questions must also be deleted when a question is deleted	Users' study session should update with changes to questions
7.1.1	7.1	Topics page must load at GET /topics	Users must be able to view topics
7.1.2	7.1	Subtopics page must load at GET /topics/{id}	Users must be able to view topics
7.1.3	7.1	Topics and Subtopics pages must load for authenticated users only	Topics pages must be visible to authenticated users only
7.1.4	7.1	Topics and Subtopics pages must show the topic name	Users must be able to view topics
7.2.1	7.2	Topics and Subtopics pages must show associated subtopics and provide links to their respective pages	Users must be able to navigate the topics tree
7.2.2	7.2	Subtopics page must show all associated parent topics and provide links to their respective pages	Users must be able to navigate the topics tree
7.3.1	7.3	Subtopics page must show all associated question and answer pairs	Users must be able to view questions from the topics page
8.1.1	8.1	Questions page must load at GET /questions	Users must be able to view questions
8.1.2	8.1	Questions page must load for authenticated users only	Questions page must be visible to authenticated users only
8.1.3	8.1	Questions page must show all question and answer pairs	Users must be able to view questions
8.2.1	8.2	Questions page must include a search term input and submit button	Users must be able to filter questions
8.2.2	8.2	On submit, questions page must display an updated, filtered questions page	Users must be able to filter questions
8.2.3	8.2	A message must be shown if no questions match the search term	Users must be able to filter questions
8.3.1	8.3	Study page must load at GET /study	Users must be able to view each question as a flashcard
8.3.2	8.3	Study page must load for authenticated users only	Users must be able to view each question as a flashcard
8.3.3	8.3	Study page must show the question	Users must be able to view each question as a flashcard
8.3.4	8.3	Study page must show the answer, but only after the "Show Answer" control is used	Users must be able to view each question as a flashcard
8.4.1	8.4	Study page must show the next question after the next control is used	Users must be able to cycle through questions in a specified order
8.4.2	8.4	Study page must show the previous question after the previous control is used	Users must be able to cycle through questions in a specified order
8.4.3	8.4	Study page must loop back to first question when the next control is used from the last question	Users must be able to cycle through questions in a specified order
8.4.4	8.4	Study page must loop back to last question when the previous control is used from the first question	Users must be able to cycle through questions in a specified order

9.1.1	9.1	Study page must show the study status of the user's associated user question	Users must be able to track their progress with each question
9.2.1	9.2	Users must be able to save a new study status for each question	Users must be able to track their progress with each question
9.2.2	9.2	User questions that no longer match the applied study filters after their study status is updated must be marked inactive	Users' study session must be updated with changes to user question study statuses
9.2.3	9.2	User questions that do now match the applied study filters after their study status is updated must be marked active	Users' study session must be updated with changes to user question study statuses
10.1.1	10.1	Filters page must load at GET /filters	Users must be able to set filters on their study session
10.1.2	10.1	Filters page must load for authenticated users only	Filters page must be visible to authenticated users only
10.1.3	10.1	Filters page must show the user's current topic filter	Users must be able to set filters on their study session
10.1.4	10.1	Filters page must show the user's current study status filter	Users must be able to set filters on their study session
10.2.1	10.2	Users must be able to apply a topic study filter from the topics page with the study control	Users must be able to apply a topic study filter
10.2.2	10.2	Users must be redirected to the study page after a topic study filter is applied	Users must be able to apply a topic study filter
10.3.1	10.3	All subtopics (recursively) of the topic study filter topic must be included in a study session	All associated subtopics must be applied by a topic study filter
10.4.1	10.4	Users must be able to apply a study status study filter from the filters page with the study status filter control	Users must be able to apply a study status study filter
10.5.1	10.5	Users must be able to remove the topic study filter from the filters page	Users must be able to adjust their study filters
10.5.2	10.5	Users must be able to remove the study status study filter from the filters page	Users must be able to adjust their study filters
10.6.1	10.6	All user questions that match the study filters must be set to active when the study filters are adjusted	Users must be able to study specific questions based on their filters
10.6.2	10.6	All user questions that do not match the study filters must be set to inactive when the study filters are adjusted	Users must be able to study specific questions based on their filters
10.6.3	10.6	The study page must only show questions that match the study filters, meaning they are marked active	Users must be able to study specific questions based on their filters
11.1.1	11.1	Reports page must load at GET /reports	Users must be able to view their progress
11.1.2	11.1	Reports page must load for authenticated users only	Reports page must be visible to authenticated users only
11.1.3	11.1	Reports page must show the percentages of questions marked with a specific study status of each study status for that user	Users must be able to view their progress
11.2.1	11.2	Users must be able to reset the study status of all user questions to 'NEW' from the reports page with the reset control	Users must be able to reset their progress
11.2.2	11.2	Users must be redirected to the updated reports page after resetting their progress	Users must be able to reset their progress
11.2.3	11.2	User questions that no longer match the applied study filters after their study status is updated must be marked inactive	Users' study session must be updated with changes to user question study statuses
11.2.4	11.2	User questions that do now match the applied study filters after their study status is updated must be marked active	Users' study session must be updated with changes to user question study statuses