**Seeding With 25 Bugs**

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| Defect No. | Defect | Output Before Seeding | Output After Seeding | Suggested Correction | Black/white box testing | Severity |
| 1 | SignUp allows users to have no first or last name | Leaving either name field blank will result in a message appearing stating that the name is required | Since name entries cannot be null in the database and names aren’t checked for length, the database returns an exception if the name fields are blank. This causes the program to crash. | Ensure that the name fields have length > 0 before attempting to add to the database | Black Box | 1 |
| 2 | The isTutor field in the database is never updated when a user adds their first tutor listing | When a tutor adds their first listing, the isTutor field is set to 1 | The isTutor field is never updated | Set a tutor’s isTutor field to 1 whenever the tutor adds a listing | Black Box | 2 |
| 3 | SignUp does not notify user of bad Password. | Entering a password that is not between 8 and 32 characters displays a message notifying the user that the password entered was invalid. | No password checking mechanism is present during user registration. | Perform an if-conditional check to ensure that the password meets the following requirement. | Black Box | 2 |
| 4 | SignUp does not notify if both passwords don't match. | When password and confirm password does not match, a dialog box pops up displaying passwords do not match. | The user will be signed up with the password given in the “password” field and the confirm password field is ignored | Perform a check condition by putting if else statement to see whether both passwords matches or not. | Black Box | 2 |
| 5 | An invalid email format is accepted during sign-up. | A valid standard email of the form (<some string>@<some domain>.<com, org, etc.>) is only accepted during new user registration. | No checking of regular expression occurs during new user registration. When the program tries to send a registration email, it will crash | Perform regular expression checking to only validate emails in the form (<some string>@<some domain>.<com, org, etc.>). | Black Box | 1 |
| 6 | Login does not notify user of bad email/password combination. | A dialog box pops up if email and password does not matches. | Users are allowed to log in even when they give the wrong password | When logging in, the hash of the given email address and password should be compared to the passHash field of the tuple with the given email address and if they’re not the same, the user should not be logged in and a message should be displayed | Black Box | 1 |
| 7 | When a user’s email is changed in UserSettings, the email is updated but the password hash is not | When the user changes the login email in the Users setting page and click submit then his email is successfully updated in the database with a passHash that corresponds to the new email and password. | User is unable to login with the new email address because the passHash was not updated with the new email | When a user changes their email, update the passHash with the new email address as well | WhiteBox | 1 |
| 8 | Users cannot change their email and password at the same time | When attempting to change email and password at the same time, both will be updated at the same time. | When a user attempts to update their email address and password at the same time, the website will respond with incorrect password every time | Ensure that the current password hash is calculated after the new email address has been updated | Black Box | 2 |
| 9 | Adding times to the user calendar does not update the database | User can add their free times in the calendar. | When user tries to add the free time, the database is not updated. The change will be reflected only on the front end | Send the updated schedule to the database. | Black Box | 1 |
| 10 | Users can manually access the TutorSearch page without logging in first | The user is redirected back to the login page if they try to manually access the TutorSearch page | The user can access the TutorSearch page without logging in first | Check for a userID cookie and redirect to login page if there is none | Black Box | 3 |
| 11 | Left drawer displaying classes does not pull out properly. | Left drawer displays all of the classes. | The drawer only displays some classes. | Check the number of classes and set the drawer to the proper size. | White box | 1 |
| 12 | List of tutors are not displayed after selecting a class. | All of the tutors were displayed correctly. | The tutors are not displayed correctly. | The tutor list is fetched from the database. | White box | 1 |
| 13 | User ID cookie is not created at login | User ID cookie is created when the user logs in | The cookie is never created, so the website will continually redirect to the login page | Create an HttpCookie called “userId” that contains the user’s ID on login. | White box | 2 |
| 14 | User tries to write the bio which exceeds the maximum requirement. | The user is stopped from saving their bio. | The user saves a bio of the maximum length, clipping remaining. | Check the length of user input. | White box | 1 |
| 15 | Left drawer displaying classes expands too far. | The left box only expands enough to fit all of the tutors. | The left box is much too large. | Correctly wrap the size of the left drawer. | Black box | 2 |
| 16 | Information of tutor selected is not correctly displayed. | All of the information for a given tutor is displayed correctly. | Some of the information is missing for tutors or displayed incorrectly. | Correct the statement that reads tutor information from the backend. | Black box | 1 |
| 17 | Attempting to send a reservation request sends the request email to the student, not the tutor | When a student makes a request, an email is sent to the tutor and the student is cc’d | When a student makes a request, an email is sent to the student only | Ensure that the to address is correct for the tutor’s address and the cc is correct for the student’s address | Black box | 2 |
| 18 | User not able to add a new class. | The user is able to add classes to tutor if they are not in the list. | The user cannot add classes to the list of available. | When a class is added, update the database. | Black box |  |
| 19 | Backend does not check for duplicate email when a user attempts to update email | The backend responds with “email already in database” if the user attempts to update their email with a duplicate address | When attempting to add a duplicate address, the database responds with an exception and the program crashes | Add a check to ensure that the new email is not in the database and notify the user if it is | Black box | 1 |
| 20 | Deleted calendar times are not updated in the database | User can remove calendar times from the front end and the database | Calendar times are removed only from the front end and will reappear if the page is reloaded | Ensure that the database is updated when a user deletes a calendar time | Black box | 2 |
| 21 | UserID cookie is not deleted on logout | When logout is clicked, the cookie containing the currently logged in user’s ID is deleted | When logout is clicked, the cookie containing the currently logged in user’s ID is not properly deleted so the user is not actually logged out | Change user ID cookie’s expiration to a date before the current date. | White box | 1 |
| 22 | User is allowed to rate a tutor multiple times | When a user rates a tutor they have already rated, the rating is updated in the database | When a user rates a tutor they have already rated, the backend attempts to add a new rating to the database which fails due to primary key constraints. This causes the whole program to crash | Check if a user/tutor combination already has an entry in the tutor rating and if so, update the rating. If not, add the new entry | Black box | 1 |
| 23 | Two users cannot have the same first and last name | First and last name are not unique values in the database | First and last name are unique values in the database. This will cause the program to crash if a new user attempts to add a user with the same name as an existing user | Remove the unique property from users.firstName and users.lastName in the database | White box | 2 |
| 24 | Tutor Settings button still shows “Become a Tutor” if the user is already a tutor | Tutor Settings button on TutorSearch page reads “Tutor Settings” if the user is a tutor, or “Become a Tutor” otherwise | Tutor Settings button on TutorSearch page reads “Become a Tutor” regardless of tutor status | Add a function to change the text of the button depending on if the user is a tutor or not. This can be checked by accessing the database and reading the user’s value for “isTutor” | Black box | 3 |
| 25 | User’s can view and rate themselves as tutors | When a user loads the list of tutors for a class that user also tutors, their listing will not be visible | When a user loads the list of tutors for a class that user also tutors, their listing will be visible, allowing them to rate themselves | When loading the list of tutors, only retrieve the tutors whose ID is not equal to the logged in user’s ID | Black Box | 2 |