Software Design Documents

For

Loan Search

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Course: Advanced Software Project

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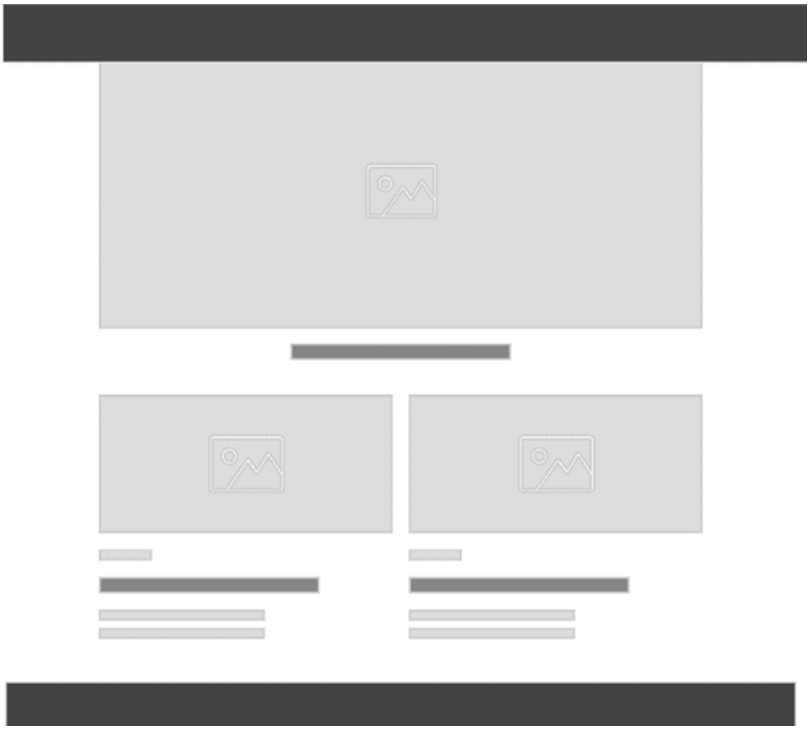
1 User Interface Design

1.1 Descriptions

This is a general illustration on how the home screen will appear to the user:



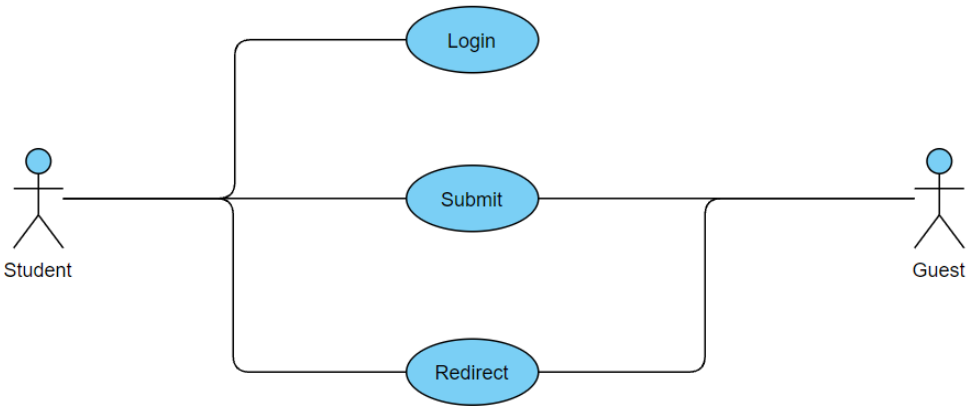
If the user has an account, there will be a log in section for them:

The account details page for them after they log in will have a general design like this:

The questionnaire forum will have this as a blueprint to the format:

This is the general concept of the way that the matches will be displayed

2 Use case Diagrams



2.1 Descriptions

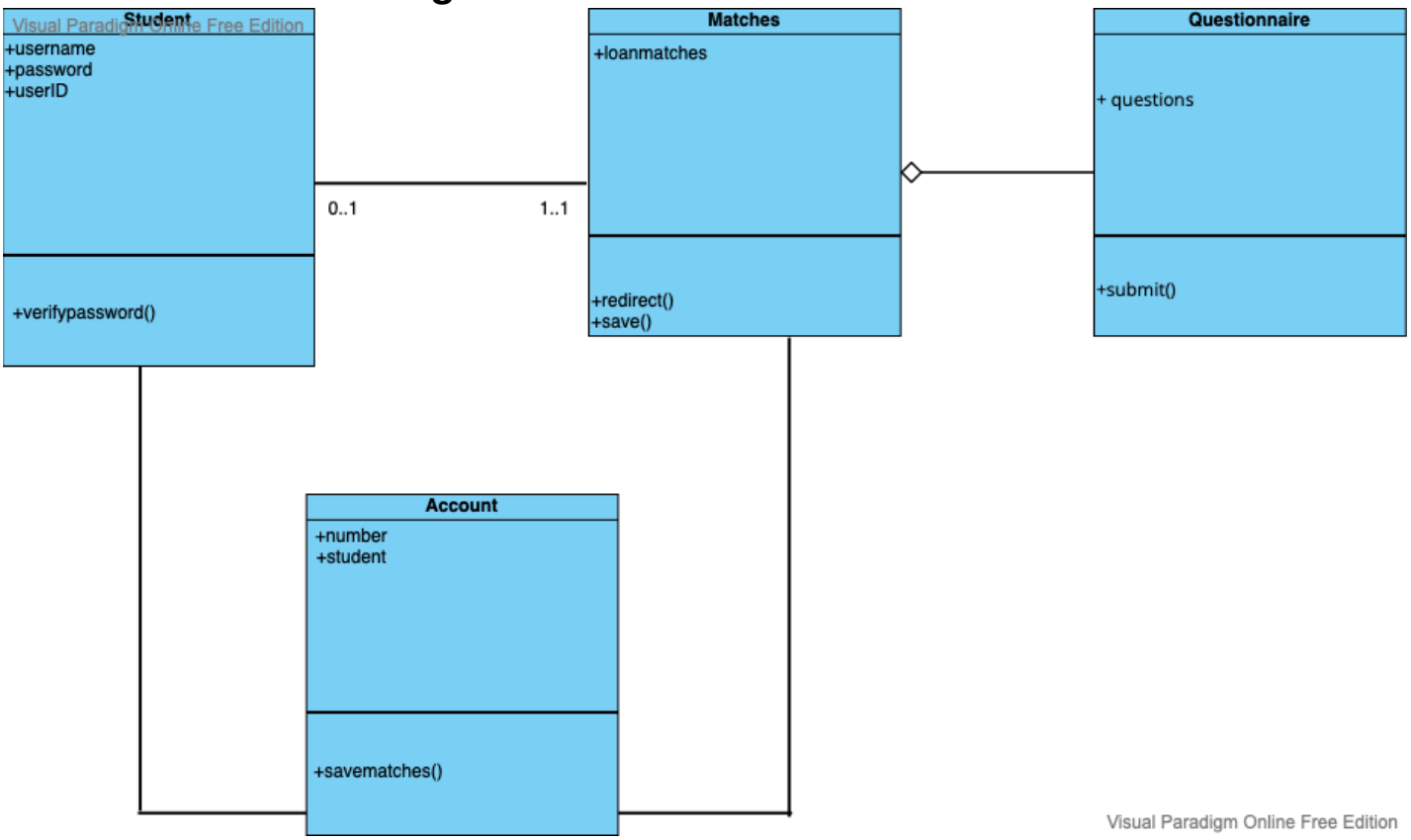
Use Case Name	Login
Use Case Description	A user logs in to view their account details
Actors	Students, Financial aid advisors
Pre-Condition	Must be connected to the internet so the system can connect to the network
Post-Condition	After logging in successfully they have account access

Scenarios	#	Steps
Actors	**1**	Entering Username & Password
	2	Validating Username & Password
	3	Allowing access to account
Extras	**1a**	Invalid Username/Password: show error message

Use Case Name	Submit Questionnaire	
Use Case Description	A user submits their questionnaire after filling out forum to get loan matches	
Actors	Guest, Students, Financial aid advisors	
Pre-Condition	Must be connected to the internet so the system can connect to the network	
Post-Condition	After filling in forum get loan matches	
Scenarios	**#**	**Steps**
Actors	**1**	Click button to start questionnaire
	2	Show questionnaire
	3	Click button to submit questionnaire
Extras	**2a**	Invalid questionnaire submission: show error message and ask user to fill in required spaces

Use Case Name	Redirect	
Use Case Description	A user can view matches listed and when available they can click a link that will redirect them to the loan website	
Actors	Guest, Students, Financial aid advisors	
Pre-Condition	Must be connected to the internet so the system can connect to the network	
Post-Condition	After matches list, redirect users to loan sites	
Scenarios	**#**	**Steps**
Actors	**1**	Submit Questionnaire
	2	Show list of matches
	3	Click on link to go to loan site of one of the matches

3 Extended Class Diagram



4 Method/Operation Specification

4.1 Description

The basics of our site operation is displayed in the table and the effect it will have from the operation. This mostly focuses on what the user can do and what it's supposed to work as. The effect is how it's supposed to work if the user is or if they are doing something.

#	Operation	Effect
1	User is Guest	Make sure Guest button works and redirects them to questionnaire
2	User is Logging in	Make sure log in redirect is valid

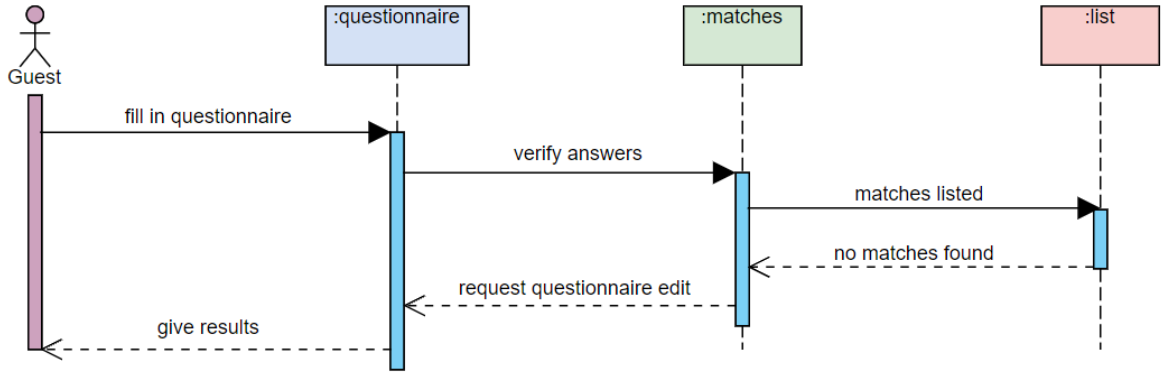
***There may be more added*

5 Interaction Diagrams

5.1 Guest

For the guest interaction diagram, it shows them filling out the questionnaire and after completing it. They submit so that the website can run matches according to the choices they filled out in the questionnaire. This leads to the matches being listed and providing a link for the guest to redirect to the loan that best fits their needs. If there are no

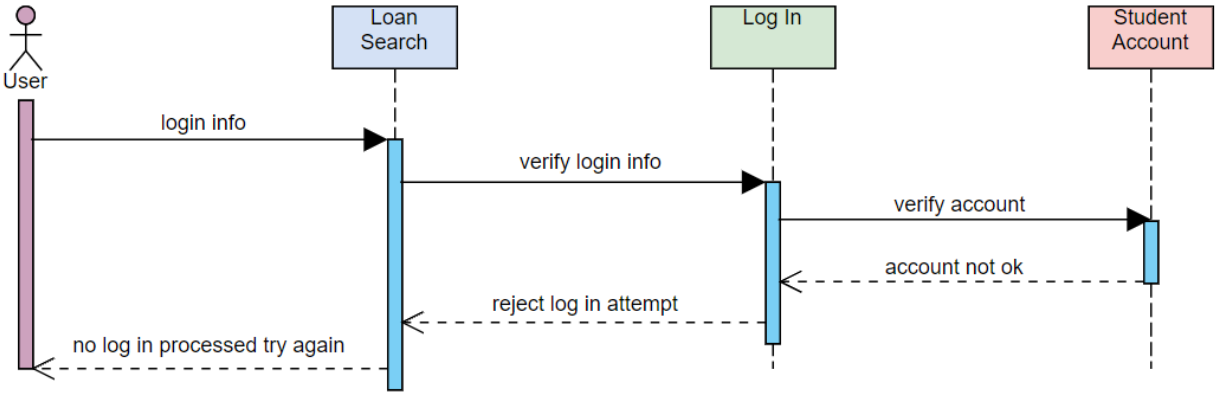
matches found the guest will be told so by a message. It will also ask for a questionnaire edit if there is anything the guest might want to change. After all of that they are given results based off their answers.



***will be further revised for the final draft.*

5.2 User

For the user interaction diagram, it shows them logging in to the website, the website would verify if they submitted the right information to log in. If it is correct, their password will be verified, and they can log in to their student account. If the information submitted by the user is incorrect then their attempt will not be verified. This will lead the website telling them to try again, and the attempt to logging in will not go through

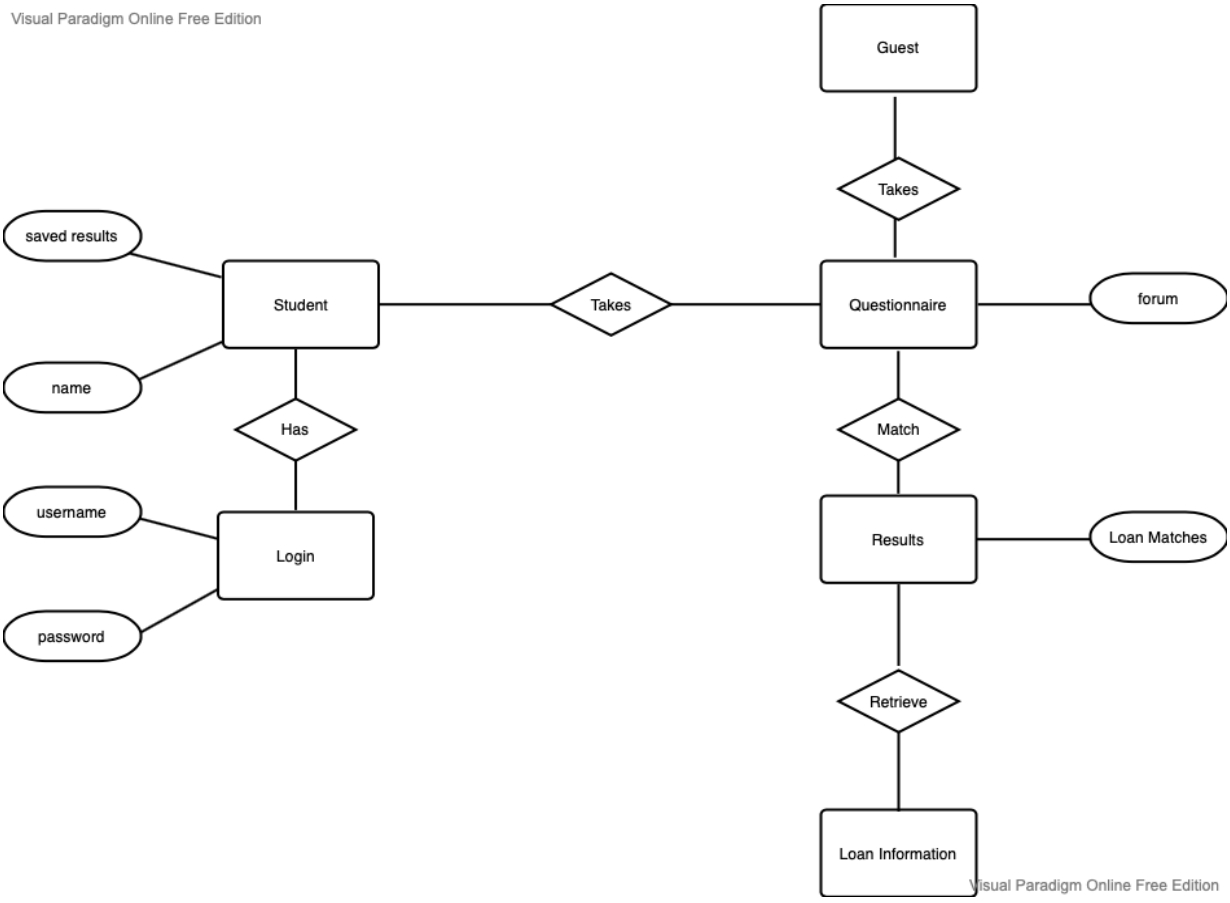


***will be further revised for the final draft.*

6 Entity–relationship model (ERD)

6.1 Description

This Entity-relationship model is a simple demonstration of the function of the Loan Search website. It gives the point of view of a registered user that being a student and a guest user, whomever else would like to use the loan search website only without log in or saving features. For the student user they have an account with their name and info as well as the ability to save the Loan results so they can look back at without refilling the questionnaire for the results. Both the student and the guest user can take the questionnaire, which the questionnaire fills the information collected from loans to display to the users. Those of which may be most suited from the choices they filled out.

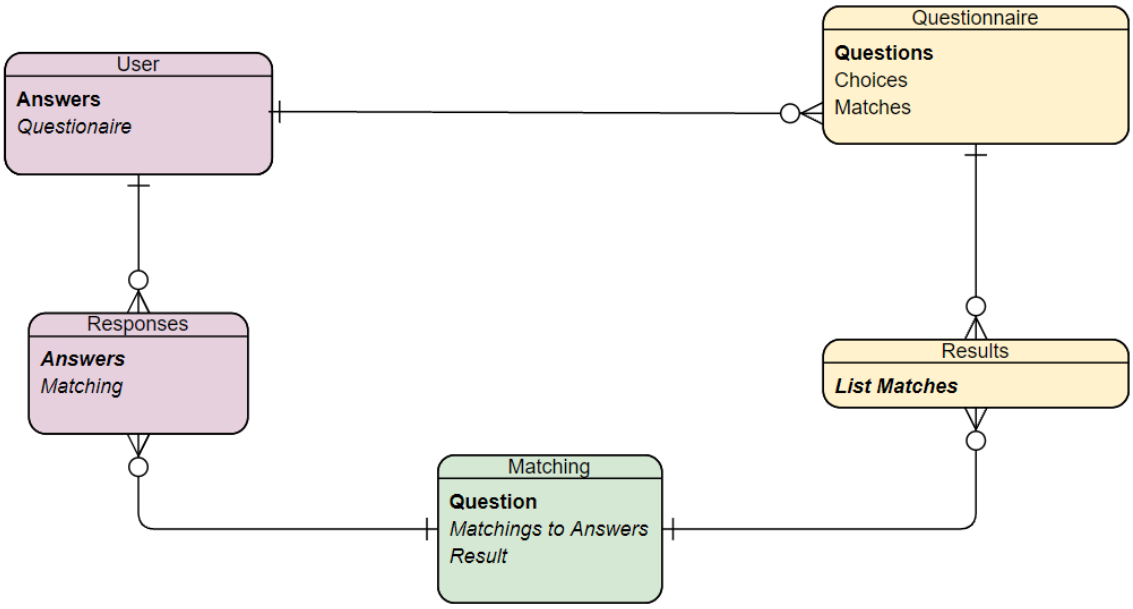


7 Database Design

7.1 Description

This Database Design is a simple demonstration of the function of the Loan Search and the way it matches. This is a general overview of it. The user who could be either a student or a guest can answer the questionnaire. The questionnaire has the questions, choices, and what they would match to. When the user responds their answers, they can start the matching of loans that can suit what they answered. During the matching

the answers to the questions will generate the results through a list of matches based of how the user answers.



**will be further revised for the final draft.*

8 Test Cases

8.1 Unit Test Cases (BB & WB)

8.1.1 Description

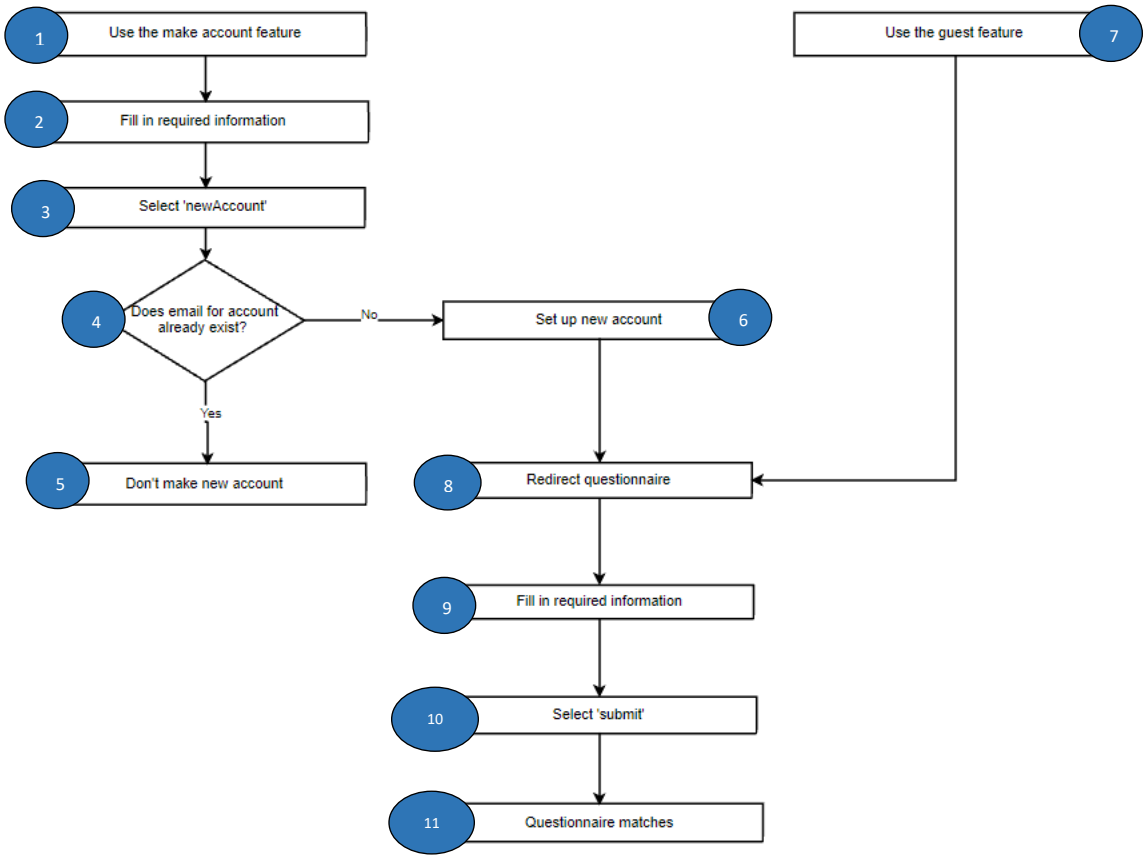
This Unit Test Cases section will provide information about the Black-Box and White-Box testing. The overview of the testing will be about certain functions of the Loan Search website. The Black-Box testing will focus on what the user can do and what they will see. Things such as correct and incorrect login, then empty, filled and submitted questionnaire messages. The White-Box testing will provide a visual in the order these features function, something the user will not see, but the website will need to function to provide the user the website service.

8.1.2 Black-Box Testing

#	Input	Expected output	Results	Comments
1	Existing username Correct password	Successful login	*Success*	Need to make the log in welcome screen visually appealing
2	Existing username Incorrect password	Error message for wrong password	TBA	Will not log in, needs error window
3	Submit empty Questionnaire	Error message for empty questionnaire	TBA	

4	Submit Filled Questionnaire	Display finding result message	TBA	
5	Save Questionnaire result	Saving questionnaire display message	TBA	

8.1.3 White-Box Testing



#	Input	Expected output	Sequence	Comments
1	1	6	1,2,3,4,6	Assuming there is no email in use, as well as all the required information filled, it will allow the user to set up a new account
2	1	5	1,2,3,4,5	If the user's email has previously been used, they will not be allowed to set up a new account
3	6	11	6,8,9,10,11	This is assuming all the required information is filled in
4	7	11	7,8,9,10,11	This is assuming all the required information is filled in

8.2 Integration Test Cases

#	Task	Test	Issues	Comments
1	User is Guest	Make sure Guest button works and redirects them to questionnaire	TBA	
2	User is Logging in	Make sure log in redirect is valid	TBA	
3	Questionnaire	Make sure choices of users are being highlighted	TBA	
4	Submission Button	Make sure Submission button is working and running the results	TBA	
5	Questionnaire Matching	Make sure the questionnaire is matching the users choices	TBA	
6	Questionnaire Results	Make sure the questionnaire results are posted with hyperlinks to redirect user	TBA	
7	User Login Info saved	Make test user account to make sure their info saves	TBA	
8	User Log out	Make sure users log out completely with same user test account	TBA	
9	Loan info	Make sure the website is connected to the loan's info	TBA	
10	No Matches	Display no matches screen to the user	TBA	Something like "can't find loan results to match"

***There may be more added as the website is detailed further*

9 References

In section 2 the use case description referenced from this:
https://warren2lynch.medium.com/use-case-description-example-4b04280d6435

In section 5 the interaction diagram was generated with the help of this: https://online.visual-paradigm.com/drive/#diagramlist:proj=0&new=SequenceDiagram

In section 6 the Entity-Relationship diagram was generated with the help of this:
https://erdplus.com/standalone

In section 7 the Database design diagram was generated with the help of this:
https://online.visual-paradigm.com/drive/#diagramlist:proj=0&new=ERDiagram

In section 8 the White box testing design diagram was generated with the help of this:
https://reqtest.com/testing-blog/white-box-testing-example/