INFM603
ALUMNI DATA
AND
ENGAGEMENT TRACKING
SYSTEM

TEAM 7

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UNIVERSITY OF
MARYLAND

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Contents

# I.   Changes since the Project Prototype

a. Webform front-end changes

➢ The fields "FirstName", "LastName" and "Program" are restricted to take only characters and not numbers.

➢ The "Grad year" field is modified to take minimum value as 2003 and maximum as the current year.

➢ From the feedback, the fields "day of the week" and "time of the day" are changed to include multi select option for day and time. We now have a single label called "Availability" which displays all the days and allows the user to select multiple time slots for each corresponding day.

b. Webform back-end changes

➢ The columns corresponding to "day of the week" and "time of the day" fields has been removed and a single column called "daytime" is added into the "alumni" table of our database. This column would store Availability in a "day timeslot" format.

E.g., if the user checks the boxes evening for Monday and Sunday respectively the column will store it as "Monday Evening , Sunday Evening".
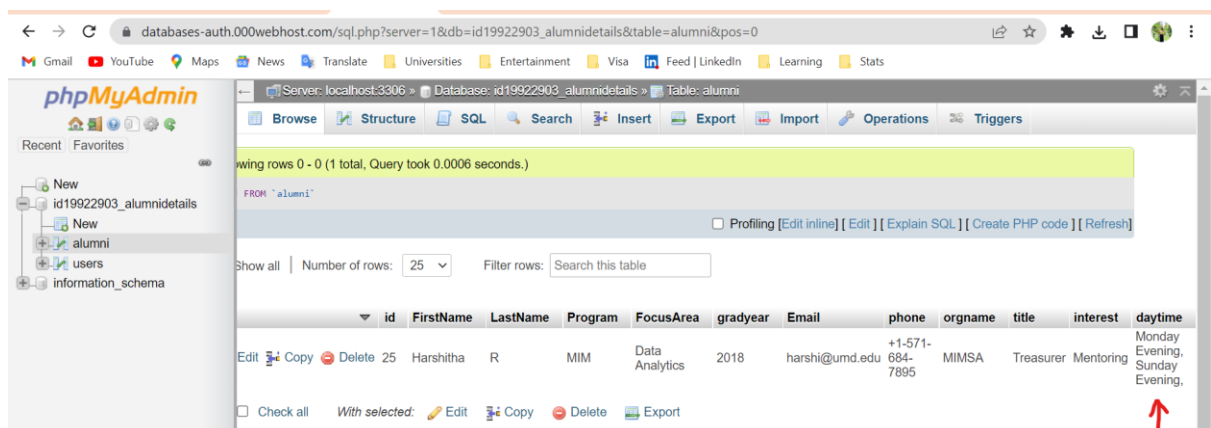
c. Login and output front-end changes

➢ Logout functionality has been implemented, wherein the user can click on the "Logout" button which will redirect them to the logout page.

➢ Added the header and footer for our login and logout page to meet the iSchool standards.

➢ The output page after the login now has a generic search functionality where the user can enter any value stored in the table to fetch the respective records.

E.g.: If the user enters an organization name like "MIMSA", only the records of the alumni who are a part of MIMSA will be displayed.

> ➢ A separate filtering functionality has been implemented for the column "Focus area" since this was the only field with a dropdown and a fixed list of values.

> ➢ Sorting functionality for all the columns has been implemented.
> ➢ Pagination has been implemented and the user can also control the number of records that needs to be displayed.

d. Login and output back-end changes

> ➢ A jquery plugin called "datatables" is used to implement all the sorting, filtering and pagination functionalities. The code modifies the basic HTML table and renders it in such a way that there are search text boxes and sorting options. The code is modified to match our specific requirements.

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II.   Execution

"000webhost" is an opensource free website hosting solution that provides an array of valuable features.

With the free web hosting type, it provides all the basics for hosting one site. 000webhost's custom control panel makes it easy to manage website, files, databases, email, backups, and FTP accounts.

➢ The php and other required executable files which are in the local system is uploaded to the file manager of the 000webhost.

➢ The "alumni" and "users" tables are added to the phpMyAdmin of the custom control panel by creating a new database.

➢ The db files are modified with the new dbname, username, password and dbhost details.

Webform URL: https://alumniwebform.000webhostapp.com/webform/webform.php
Login URL: https://alumniwebform.000webhostapp.com/login/login.php

III.   Test plan and Test Report

a. **Functionality Testing**

Webforms Testing:

• HTML and CSS validation: Our webform and login website's header and footer sections are replicated from the current iSchool website and integrated to complement our functionality.

Links testing:

• Internal links validation: The different elements in the navigation bar redirects to the appropriate UMD websites. (eg "News", "Events", "Contact")

• No broken links or unreferenced pages on both of our websites.

Requirements as mentioned in our Project Detailed Design:

A. The solution must include a web form for an alumni to submit the following information: First name, Last name, Major, Focus area, Graduation year, Phone number, Email address, Employer name, Job title, Areas of interest, and Available date and time.

➢ Few field names have been modified for better clarity.

B. The form must allow the alumnus to select more than one area of interest.

C. The form must validate for an accurate format in email address and phone number.

➢ Phone numbers are of input type "tel" but it doesn't validate for a particular pattern since the idea was to keep it generic.

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D. The form must enforce that most of the fields are required/mandatory whereas one or two of them would be optional.

E. Areas of interest include Mentoring, Mock Interviews, Alumni Panel, Resume Reviews, and "Other", with a text field for more information.

  ➢ Based on the feedback received, we have removed the "other" and the textbox from our requirements.

F. Data from the form submittal must be saved in the database

G. A faculty member must be able to retrieve contact information for alumni from the database based on areas of interest.

H. A faculty member must be able to see that an alumnus has offered to be available at a certain time on a certain day.

  ➢ Based on the feedback, we have changed this to allow the user to select multiple values.

The detailed test report of the functionalities is mentioned below.

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		WEB FORM TESTING				
Test Case #	**Test Scenario**	**Test Sequence**	**Test Data**	**Expected Result**	**Actual Result**	**Status**
1	Complete data entry into the alumni webform	1. Enter First Name	Sandy	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		2. Enter Last Name	Staub	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		3. Enter i-School Program	MIM	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		4. Enter Graduation Year	2022	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		5. Enter Phone Number into "Contact Number" field	1234567890	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		6. Enter Email address into "Email ID" field	sstaub1@umd.edu	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		7. Select a focus area from the "Focus Area" dropdown	Cybersecurity	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		8. Enter my employer name into "Organization Name" field	Robert H. Smith School of Business	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		9. Enter my job title	Director	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		10. Select my area of interest for volunteering	Mentoring	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		11. Select the days and times I would like to volunteer	Monday morning; Tuesday afternoon	Entry written into corresponding field in the database	Entry written into corresponding field in the database	PASS
		12. Click "Register"		All values are entered into database and redirect to the "success.php" webpage	All values are entered into database and redirect to the "success.php" webpage	PASS
2	Test First Name as required field	Leave First Name blank and click "Register"		Popup message stating that "First name is required."	Popup message stating that "First name is required".	PASS
3	Test Last Name as required field	Enter First Name and leave Last Name blank; click "Register"		Popup message stating that "Last name is required."	Popup message stating that "Last name is required".	PASS
4	Test iSchool Program as required field	Enter First Name and Last Name; leave Program blank; click "Register"		Popup message stating that "Program name is required."	Popup message stating that "Program name is required."	PASS
5	Test Graduation Year is 2003 or later	1. Enter First Name, Last Name and Program				
		2. Enter a graduation year before 2003; click "Register"	2001	Popup message stating that "Graduation year must be between 2003 and current year."	Popup message stating that "Graduation year must be between 2003 and current year".	PASS
6	Test Graduation Year is 2022 or earlier	1. Enter First Name, Last Name and Program				
		2. Enter a graduation year after 2022; click "Register"	2025	Popup message stating that "Graduation year must be between 2003 and current year."	Popup message stating that "Graduation year must be between 2003 and current year".	PASS

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7	Test Contact Number as required field	1. Enter First Name, Last Name, Program and Graduation Year				
		2. Leave Contact Number blank; click "Register"		Popup message stating that "Contact Number is required."	Popup message stating that "Contact Number is required."	PASS
8	Test Email ID as required field	1. Enter First Name, Last Name, Program, Graduation Year, and Contact Number				
		2. Leave Email ID blank; click "Register"		Popup message stating that "Email ID required."	Popup message stating that "Email ID required."	PASS
9	Test Focus Area as required field	1. Enter First Name, Last Name, Program, Graduation Year, Contact Number and Email ID				
		2. Leave Focus Area blank; click "Register"		Popup message stating that "Focus Area is required."	Popup message stating that "Focus Area is required."	PASS
10	Test Organization Name as required field	1. Enter First Name, Last Name, Program, Graduation Year, Contact Number, Email ID and Focus Area				
		2. Leave Organization Name blank; click "Register"		Popup message stating that "Organization Name is required."	Popup message stating that "Organization Name is required."	PASS
11	Test Job Title as required field	1. Enter First Name, Last Name, Program, Graduation Year, Contact Number, Email ID, Focus Area and Organization Name				
		2. Leave Job Title blank; click "Register"		Popup message stating that "Job Title is required."	Popup message stating that "Job Title is required."	PASS
12	Test Area of Interest as required field	1. Enter First Name, Last Name, Program, Graduation Year, Contact Number, Email ID, Focus Area, Organization Name, and Job Title				
		2. Do not select any Areas of Interest and click "Register"		Popup message stating that "Area of Interest is required."	Popup message stating that "Area of Interest is required."	PASS

LOGIN FORM TESTING						
Test Case #	Test Scenario	Test Sequence	Test Data	Expected Result	Actual Result	Status
1	Entering the right credentials to login	1. Enter the username and password	username:iSchoolAdmin, pwd: INFM603_finalproject	Lands on the output page which displays the alumni table.	Lands on the output page which displays the alumni table.	PASS
		2. Click on Login button				
2	Invalid Credentials	1. Enter invalid username or password	username: check pwd: check	Stays on the same page and pops up an error message saying invalid credentials.	Stays on the same page and pops up an error message saying invalid credentials.	PASS
		2. Click on Login button				
3	General search in the output page	1. Enter a specific organization name in the search box	MIMSA	Displays only the entries with organization name "MIMSA"	Displays only the entries with organization name "MIMSA"	PASS
4	General search in the output page for non-referenced value	1. Enter a random value in the search box	abcd	Displays a message that says "No matching records found"	Displays a message that says "No matching records found"	PASS
5	Filtering all the entries based on Focus Area value	1. Select the required Focus area from the dropdown.	Data Analytics	Displays only the entries with focus area "Data Analytics"	Displays only the entries with focus area "Data Analytics"	PASS
6	Sorting	1 Click on the button next to the FirstName column	FirstName	Displays all the entries based on descending order of "First Name"	Displays all the entries based on descending order of "First Name"	PASS
7	Logging out from the output page	1. Click on "Logout" button		Lands on the logout page by successfully logging out the user.	Lands on the logout page by successfully logging out the user.	PASS
8	Logging back after Logout	1. Click on "LogBack In" button		Lands on the login page	Lands on the login page	PASS

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   b.   Usability Testing

   Navigation testing:

- All pages are functional and usable.
- Access to main menu (Home and other pages) from all the pages.
  - ➢ The "LogBack In" and "Fill out another form" buttons will redirect back to our main login and webform pages respectively.

   Content testing:

- There are no grammatical errors.
- Content is informative, structured and logically linked.
- Images are placed appropriately with correct dimensions.

   c.   Interface Testing

- Application: Test requests are sent correctly to the database and are displayed correctly onto the client side.
- Web Server: Web server is handling all application requests without any service denial.
- Database Server: Validation of the relational DB queries.
  - ➢ We have an INSERT query that takes all the values from the webform and enters it into our database.
  - ➢ We also have a SELECT query that displays all the values in our present in our db.


   d.   Database Testing

- Data Integrity to be maintained while creating, updating, or deleting data in database.
  - ➢ The passwords of the login users are hash encrypted to prevent anyone from viewing it.
- Test data retrieved from the database is shown accurately in our web application.

   e.   Compatibility Testing

- Browser Compatibility test: Cross browser website testing in different (Google chrome, Microsoft edge, Mozilla Firefox, Safari).
  - ➢ The website functionality and it's appearance was consistent across multiple browsers. The error pop ups for missing fields/incorrect entries were also verified.
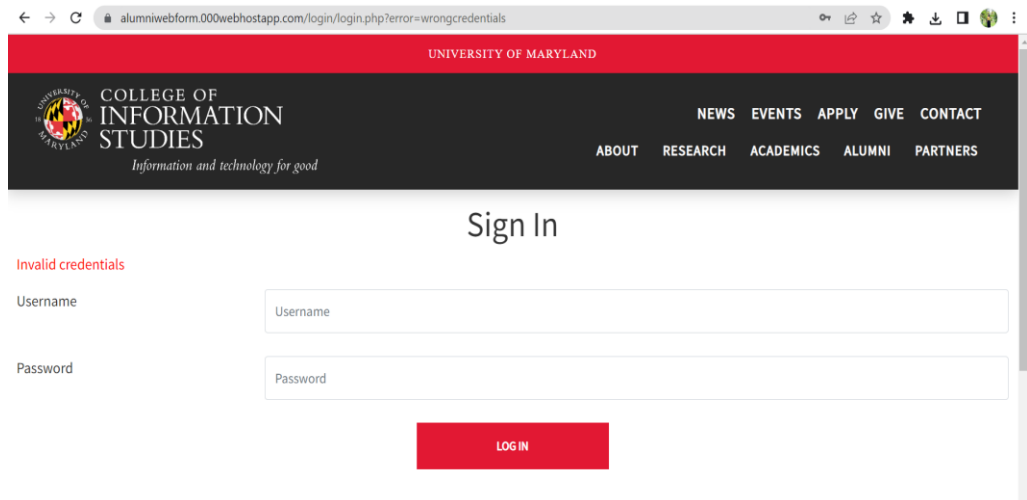- Platform Compatibility test: Cross platform testing in different OS (Windows, iOS/Mac OS)

f. Performance Testing
- Concurrency testing was done with multiple registrations at the same time.
- Request time was on average 30-40ms.
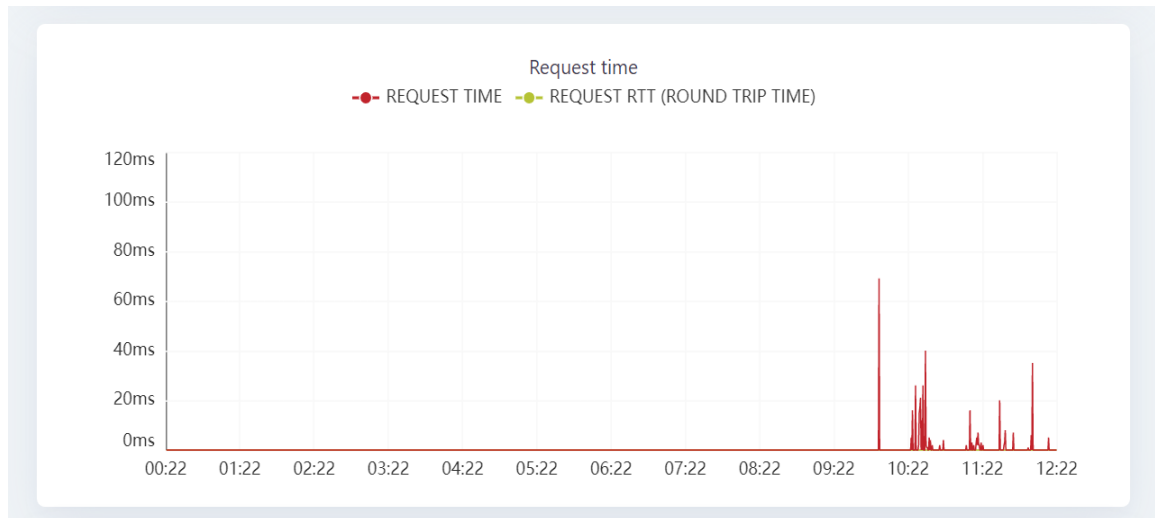
g. Security Testing
- Testing unauthorized access for our Login Page.

- Website has SSL certification, which makes its communication to the server secure.