

# **Enterprise Web Software Development**

**Course: COMP1640**

Submitted To	Submitted By
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**Team Name:** The Ultimate's

**Team Members & Roles:**

UI Designer & Tester

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## **Introduction:**

"The Ultimate's" team is consist of four members. A database Designer, An information architect, A programmer which is also playing a role of web designer and I took the part of testing and scrum master in our team. We worked together and built a secure web-enabled role-based system for collecting ideas for improvement from students in a large University. We meet all the requirements which are given to us for building this system. The approximate report of the system is produced according to a system tester and scrum master's point of view.

## **Product Evaluation:**

There has a large university with the Quality Assurance Manager, OA Coordinator, QA Manager, Staffs, Students and others. This University wants to build a secure web-enabled role-based system for collecting ideas for improvement from students. For developing this system there are lots of requirements. Full filling all the requirements, provided them a secured system which have a suitable and secure database system, well designed and developed system as well as test this system very accurately. By this idea collecting improvements system from the students, University can improve their entire environment.

## **Strength of proposed system:**

In this system there are lots of strong fact. Those are the key points. The strength of the system is described below –

- User interface well developed for understanding
- Responsive for all user interface like smart phones, Laptops, PC, tablets etc.
- Live notification for admin
- Email notification is available here
- Download individual idea as zip folder
- Secure role based user login
- Admin can manage whole system and takes any kind of changes need
- SQL queries are completed accurately for better performance
- Strong validation rules are applied in the system
- The whole system is more efficient to use
- Statistical reports are represented here
- Scripts are protected and can't oversee
- Prevents SQL injection

## **Weakness of the proposed system:**

The system have some weak points too. Some features should be added in the system but we can't give. That's are –

- Some part of the system designed badly
- No live notification for student
- Need to host in a better quality server

## **Further Development:**

There are some work to do for further development in this system. Those are –

- Live chat for the QA coordinator and student
- UI design will be more improved
- More Security system will be applied
- System performance will be better in further work

## System Walkthrough:

### Login page –

This represent the login page of system where user must have provide their email address and password for entering the system.

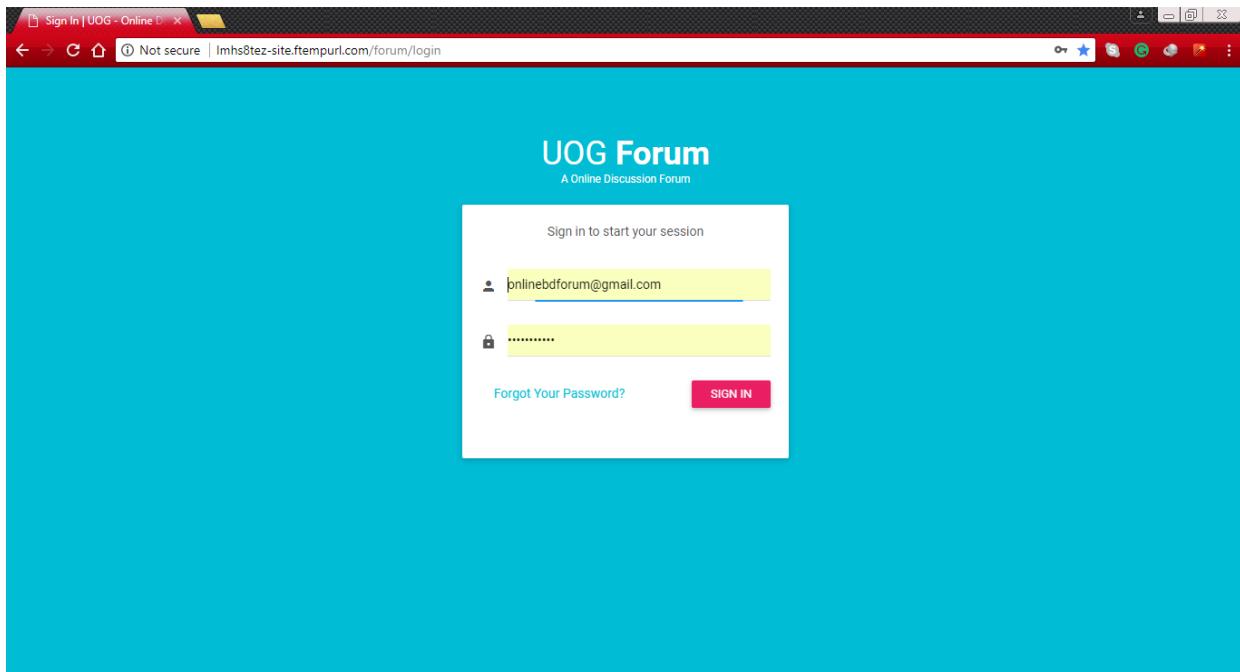
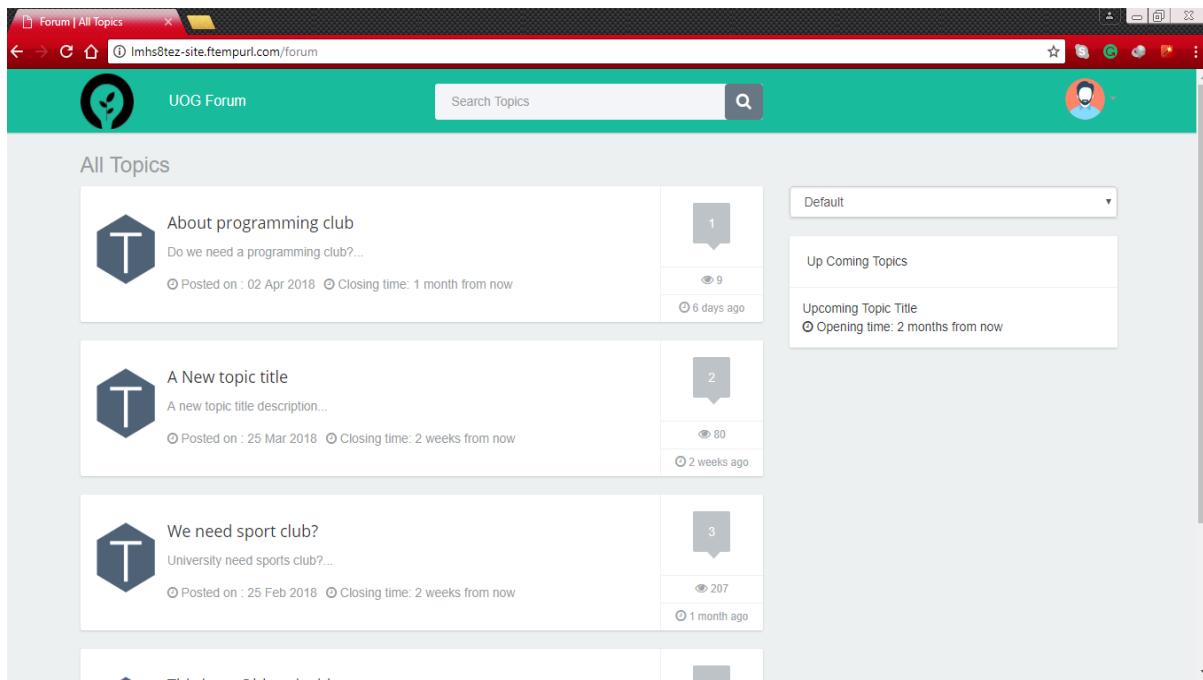


Figure 1: Login Page for Role based user

## User Interface Page –

After login the system Admin or Student see the home page of the system. There are some discussion about different topic.



The screenshot shows a web browser displaying the 'UOG Forum' website. The URL in the address bar is [lmhs8tez-site.ftempurl.com/forum](http://lmhs8tez-site.ftempurl.com/forum). The page title is 'Forum | All Topics'. The main content area is titled 'All Topics' and lists three posts:

- About programming club**  
Do we need a programming club?...  
Posted on : 02 Apr 2018 | Closing time: 1 month from now  
6 days ago
- A New topic title**  
A new topic title description...  
Posted on : 25 Mar 2018 | Closing time: 2 weeks from now  
2 weeks ago
- We need sport club?**  
University need sports club?...  
Posted on : 25 Feb 2018 | Closing time: 2 weeks from now  
1 month ago

On the right side of the page, there are two boxes: 'Default' (a dropdown menu) and 'Up Coming Topics' (a section showing an upcoming topic with title 'Upcoming Topic Title' and opening time '2 months from now').

**Figure 2: User Interface of admin and student**

## Student Dashboard Page –

In this part student can see their posted idea list and replies list as well as can search anything in the top bar.

The screenshot shows a web browser window for the UOG Forum. The URL in the address bar is [lmhs8tez-site.ftpurl.com/forum/my-dashboard](http://lmhs8tez-site.ftpurl.com/forum/my-dashboard). The page title is "UOG Forum". A search bar at the top right contains the placeholder "Search Topics" with a magnifying glass icon. On the far right, there is a user profile icon. Below the header, the text "UOG Forum > My Dashboard" is displayed. The main content area features a welcome message "Welcome Salihan Mriday!". Two large boxes are present: one labeled "Idea" with the number "5" and another labeled "Replies" with the number "3". Below these, sections for "Latest Idea" and "Latest Replies" show two posts each. The "Latest Idea" section has two items: "No we don't need" (posted 2 weeks ago) and "Programming Contest" (posted 2 days ago). The "Latest Replies" section has two items: "Also an AC could be added in the sports zone" (posted 3 days ago) and "ok1" (posted 1 week ago).

Idea	Replies
5	3

Latest Idea	Latest Replies
No we don't need ② weeks from now	Also an AC could be added in the sports zone ③ days ago
Programming Contest ② days ago	ok1 ① week ago

**Figure 3: Student Dashboard**

## Idea Post Page –

Student can post any kind of idea under the topic. But they can't post any idea after the topic date is over.

The screenshot shows a web browser window for the UOG Forum. The URL in the address bar is [http://imhs0tez-site.ftempurl.com/forum/topic/view&topic\\_id=5](http://imhs0tez-site.ftempurl.com/forum/topic/view&topic_id=5). The page title is "UOG Forum > General Discussion > Topic Details". The main content area displays a topic titled "About programming club" with the question "Do we need a programming club?". Below the question is a timestamp "Posted 6 days ago". To the right of the main content are two sidebar boxes: "Up Coming Topics" (listing "Upcoming Topic Title" and "Opening time: 2 months from now") and "My Active Topics" (listing "About programming club", "A New topic title", "We need sport club?", and "This is an Old topic title"). At the bottom left of the main content area, there is a green button labeled "Post a Idea".

**Figure 4: Idea Post Option**

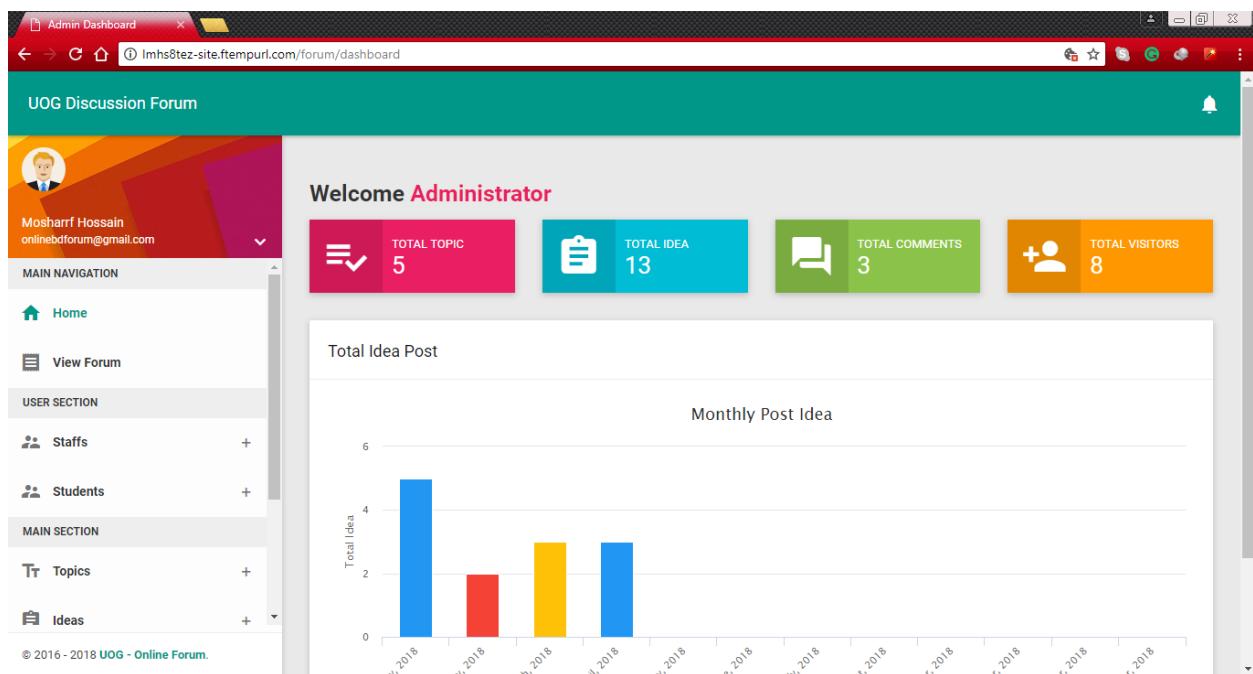
In this part student can comment under an idea post as well as can give thumbs up or down for an idea. Student can hide their real name and post a comment as anonymous

The screenshot shows a web browser window for the UOG Forum. The URL is [http://lmhs8tez-site.ftempurl.com/forum/topic/idea/view&idea\\_id=13](http://lmhs8tez-site.ftempurl.com/forum/topic/idea/view&idea_id=13). The page title is "Forum | View Idea". The main content area displays an idea titled "Programming Contest" with the description: "Different types of programming contest can be held here." Below the title is a user profile icon for Salihan Mriday and the posting date "08 Apr 2018". To the right of the post are "Like" and "Dislike" buttons with counts of 0 and 1 respectively. A yellow box highlights the "Post a Comment" button. On the left, there's a sidebar for "Up Coming Topics" with a placeholder topic. On the right, there's a sidebar for "My Active Topics" with several listed topics: "About programming club", "A New topic title", "We need sport club?", and "This is an Old topic title". At the bottom, there's a "Comments" section with a text input field, a "Post As:" dropdown with "Real user" and "Anonymous" options, and checkboxes for "I agree to the Terms and Conditions" and "Add Comment". The footer includes copyright information "© 2008-2018 by UOG Discussion Forum. All rights reserved." and social media sharing icons for Facebook, Twitter, and Google+.

**Figure 5: Like or dislike an idea, Post Comment and post as what wants**

## Admin Dashboard Page –

This segment shows the admin dashboard and responsibility in the system.



**Figure 6: Admin Dashboard**

## Topic Form Page –

Here admin can add topic for the student.

The screenshot shows a web browser window for 'UOG Discussion Forum'. The URL is [lmhs8tez-site.ftempurl.com/forum/dashboard/add/topic](http://lmhs8tez-site.ftempurl.com/forum/dashboard/add/topic). On the left, there's a sidebar with a user profile for 'Mosharrf Hossain' (onlinebforum@gmail.com) and sections for 'MAIN SECTION' (Topics, Ideas, Comments, Reports), 'My Profile', and copyright information ('© 2016 - 2018 UOG - Online Forum.'). The main content area is titled 'Add new Topic' and contains a form titled 'Topic Form'. The form fields are: 'Topic Title' (placeholder: Type topic title), 'Description' (placeholder: Type topic description), 'Start Date' (placeholder: Please choose a date), 'Closure Date' (placeholder: Please choose a date), 'Final Closure Date' (placeholder: Please choose a date), and 'Publication Status' (dropdown menu showing 'Deactive'). A blue 'Add Topic' button is at the bottom right of the form.

**Figure 7: Topic Form**

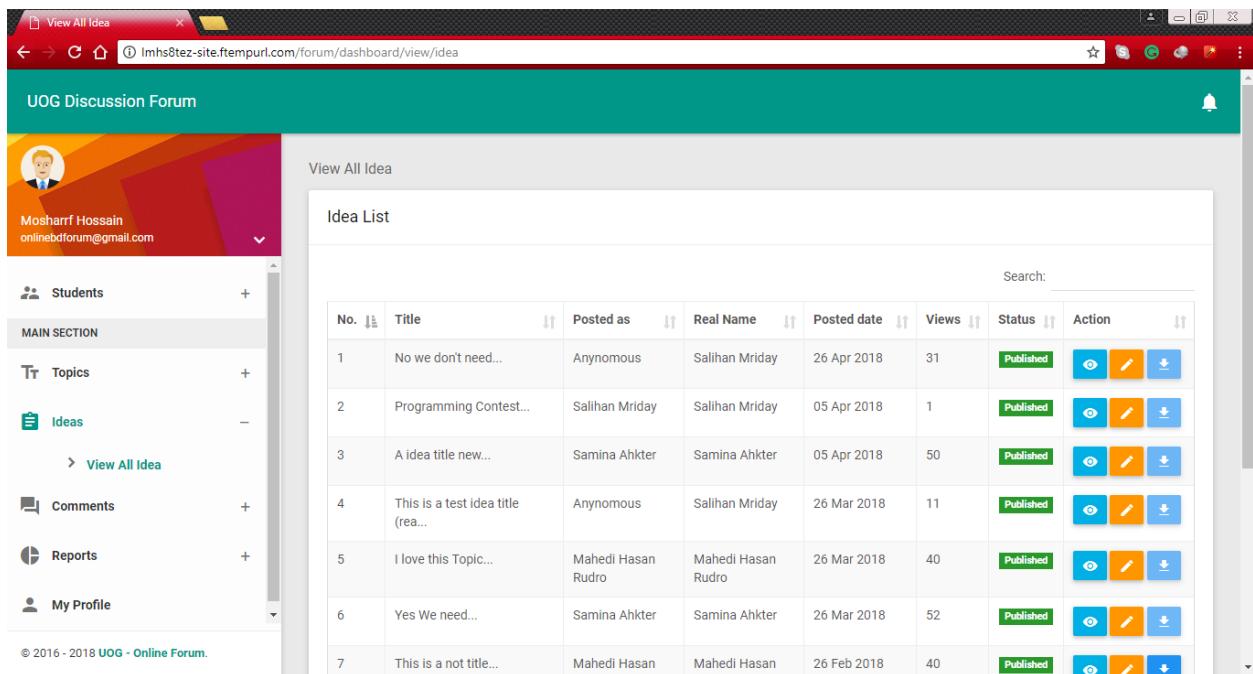
## Topic List Viewed Page –

At this point view all the topic list which are posted in forum discussion.

No.	Title	Start Date	Closure Date	Final date	Total Idea	Status	Action
1	About programming club	02 Apr 2018	02 Jun 2018	04 Jun 2018	1	Published	
2	A New topic title	25 Mar 2018	25 Apr 2018	29 Apr 2018	2	Published	
3	We need sport club?	25 Feb 2018	25 Apr 2018	29 Apr 2018	3	Published	
4	Upcoming Topic Title	25 Jun 2018	26 Jul 2018	31 Jul 2018	0	Unpublished	
5	This is an Old topic title	01 Jan 2018	15 Feb 2018	24 Mar 2018	7	Closed	

## All Idea Showing Page –

This represents the idea list which are posted by student.



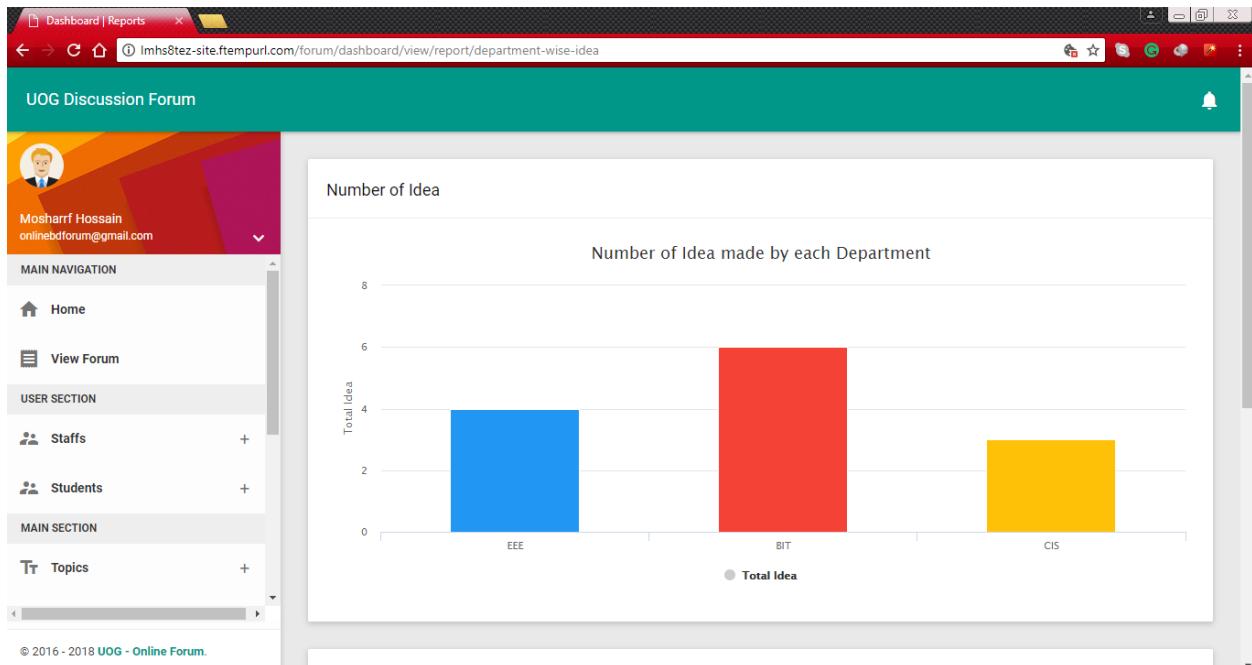
The screenshot shows a web browser displaying the 'View All Idea' page of the UOG Discussion Forum. The URL in the address bar is <http://lmhs8tez-site.ftpurp.com/forum/dashboard/view/idea>. The page has a green header with the title 'UOG Discussion Forum'. On the left, there is a sidebar with a user profile picture of Mosharrif Hossain and his email address (onlineebdforum@gmail.com). The sidebar also includes links for 'Students', 'Topics', 'Ideas' (which is expanded to show 'View All Idea'), 'Comments', 'Reports', and 'My Profile'. The main content area is titled 'View All Idea' and contains a table titled 'Idea List'. The table has columns for No., Title, Posted as, Real Name, Posted date, Views, Status, and Action. There are 7 rows of data, each with a set of three icons for 'View', 'Edit', and 'Delete'. The data in the table is as follows:

No.	Title	Posted as	Real Name	Posted date	Views	Status	Action
1	No we don't need...	Anynomous	Salihan Mriday	26 Apr 2018	31	Published	
2	Programming Contest...	Salihan Mriday	Salihan Mriday	05 Apr 2018	1	Published	
3	A idea title new...	Samina Ahkter	Samina Ahkter	05 Apr 2018	50	Published	
4	This is a test idea title (rea...	Anynomous	Salihan Mriday	26 Mar 2018	11	Published	
5	I love this Topic...	Mahedi Hasan Rudro	Mahedi Hasan Rudro	26 Mar 2018	40	Published	
6	Yes We need...	Samina Ahkter	Samina Ahkter	26 Mar 2018	52	Published	
7	This is a not title...	Mahedi Hasan	Mahedi Hasan	26 Feb 2018	40	Published	

**Figure 8: Viewing all the idea list**

## **View Report Page –**

Here viewing all those reports those are system need. The following screenshort showing each idea submitted by department wise.



**Figure 9: Idea posted by each department**

## Evaluation of Team:

No.	Name	Role	Comments	Performance
1.	Arman Hossain	Database Designer	He gave tremendous effort in creating database for the proposed system. Sometimes he faces some confusions while creating the database tables but at the end he has become successful to overcome the confusions.	9/10
2.	Irina Alam	Information Architect	She gives a huge effort to gather all the requirements data and draw all the diagrams those are needs. Overall her performance is good	8/10
3.	Mosharraf Hossain	Programmer and Designer	He tried his best for developing the system. He works properly and co-operate with others very efficiently.	9/10
4.	Mahadi Hasan	UI Designer and Tester	I have tried my best to complete my role as efficiently as possible. I was available in all meeting and tries my best to contribute while any problem arises.	9/10

## **Self-Evaluation:**

### **Own Efforts:**

As I played the part of both UI Designer and Tester part. I needed to give best endeavors than regular in the proposed framework. I present all the meeting that held week after week and gave my attempts to survey to guarantee the strength of the proposed framework. In the wake of gathering the necessities from analyst I portrayed the UI plan of the framework. Ensuing the design of UI framework I offered it to the programmer to build up the proposed framework.

Later to finish the advancement software developer gave me the framework for testing. I have done the whole test effectively. Earlier to the beginning the test, I have learned about enterprise web application testing and I attempted my best to test the framework more expert way.

As a tester fundamental concentration was to assurance all the usefulness of the framework. Then I have made a test plan for the testing. In this way, above all else, I have checked the usefulness of the framework then I have finished the security, validation, integration, responsive, performance, usability testing and so on.

At long last, there is no bug in the framework and a test log is made with a useful pass rate.

### **Lesson Learnt:**

In this group project, here I manage two part. I acted as both UI Designer and Tester. There are numerous things I have picked up amid this project. Right off the bat I needed to work in a group and I have figured out how to maintain group work and how to team up with every single

colleagues to give an effective result of an undertaking. Particularly I have learned agile strategy for the building up the framework.

As UI architect I have made the full outline of the proposed framework. For making this draw I contemplated hard about how to configuration well portray for a framework and what might be taken after.

As a tester, I needed to learn about testing related techniques. I presented myself a portion of the computerization testing instruments that make more productivity to my work. However doing the security testing I have found out about web security, how to shield from various assaults like SQL infusion, Brute power assault and so on in integration and usability testing, I have additionally found out about this.

At last I discovered that group comprehension can improve framework inside a short due date

## **Conclusion:**

Despite the fact that to develop the framework, it was an extreme employment however we have made it effectively toward the end. To develop the framework, scum strategy followed appropriately. Framework satisfied the greater part of the given requirements and every one of the capacities working straightforwardly. Group joint effort was too great that made the assignment less demanding for us.

## Appendix- A: User Interface Design

### UI Design:

User Interface is the outline for a system or product, for example, the look of an application, without breaking a sweat of utilization for the client. In short design patterns are solution to repeating issues. By augmentation, UI configuration designs are answer for normal UI issues. It configures more often than not alludes to the plan of graphical UIs—however can likewise refer to others, for example, regular and voice UIs.

UI Design interiors around envisioning what clients may need to do and ensuring that the interface has components that are reliable for access, comprehend, and use to encourage those activities. UI unites ideas from association outline, visual plan, and data engineering (usability.gov, 2018).

Some elements of the Interface –

**Input Controls** – Buttons, text field, radio buttons, checkboxes, date field

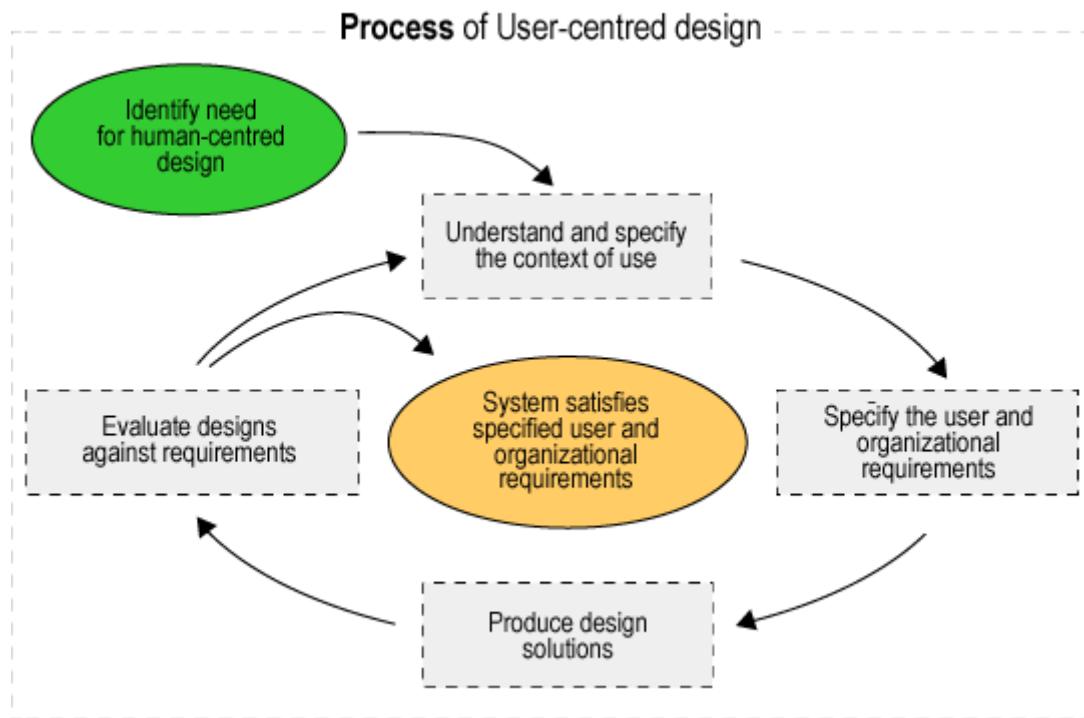
**Navigational Modules** – Icons, sidebar, tags, slider, search box

**Informational Elements** – Message boxes, Notification bar

**Containers – Accordion**

## User Interface Design Process:

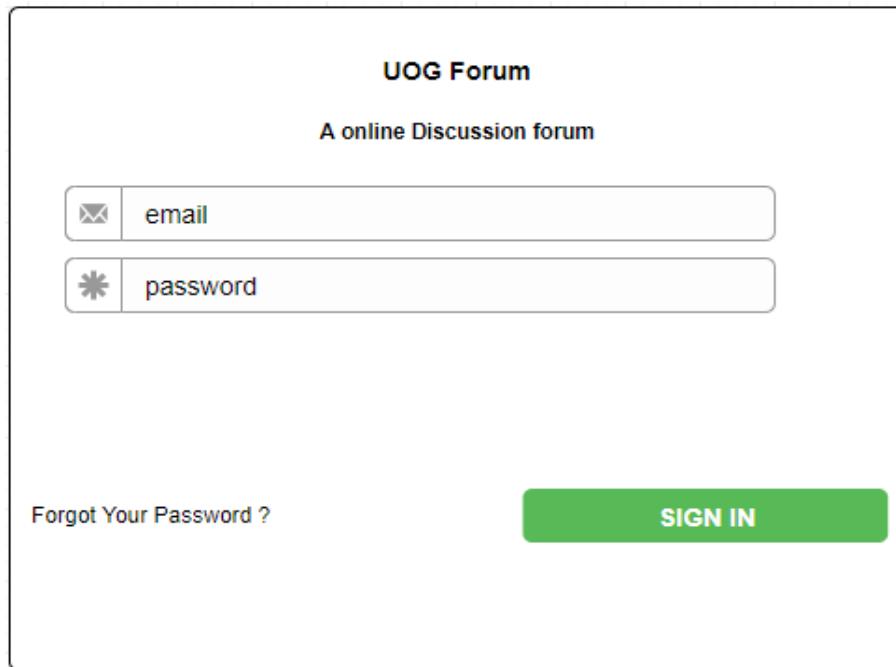
User Interface comprises some processes. This process must have to follow a designer to draw the interface of any system. In this section those processes are represented –



**Figure 10: Process of UI Design (Anton Sergeev, 1999-2010)**

## User Interface of system:

Proposed system User Interface Design is given below –



The image shows a login form for the "UOG Forum". The title "UOG Forum" is at the top, followed by the subtitle "A online Discussion forum". Below this are two input fields: one for "email" with an envelope icon and another for "password" with a asterisk icon. At the bottom left is a link "Forgot Your Password ?" and at the bottom right is a green "SIGN IN" button.

*Figure 11: Login Form*

The screenshot shows the user interface of the UOG Forum. At the top left is the "UOG Forum" logo. To its right is a search bar with the placeholder "Search..." and a "Go!" button. Further right is a user profile icon. Below the header, the text "All Topics" is displayed. Two forum topics are listed:

- About Programming Club**: A purple diamond icon with a white letter 'T'. Description: "Do we need a programming Club". Posted on: 04 Apr 2018. Closing Time: 1 month from now. Statistics: 0 replies, 4 views, posted 2 days ago.
- We need Sports Club**: A purple diamond icon with a white letter 'T'. Description: "University Need Sports Club?". Posted on: 25 Feb 2018. Closing Time: 3 weeks from now. Statistics: 3 replies, 10 views, posted 1 month ago.

To the right of the topics, there is a sidebar with a dropdown menu set to "Default". The sidebar also lists "Up Coming Topics" and "Upcoming Topics Title Opening Time: 2 months".

Figure 12: User Interface of UOG Forum

The screenshot shows the Student Dashboard. At the top left is the "UOG Forum" logo. To its right is a search bar with the placeholder "Search..." and a "Go!" button. Further right is a user profile icon. Below the header, the text "Welcome Salihan Mriday!" is displayed.

Two main statistics are shown in colored boxes:

- Idea**: A pink box containing the number 5.
- Replies**: A pink box containing the number 3.

Below these statistics are two sections:

- Latest Idea**: A blue box containing the text "we don't know" and "3 weeks from now".
- Latest Replies**: A blue box containing the text "Also an AC could be added sports zone" and "5 hours ago".

At the bottom, there are two more boxes:

- A pink box containing the text "This is a test idea title" and "1 week ago".
- A pink box containing the text "OK" and "1 week ago".

Figure 13: Student Dashboard

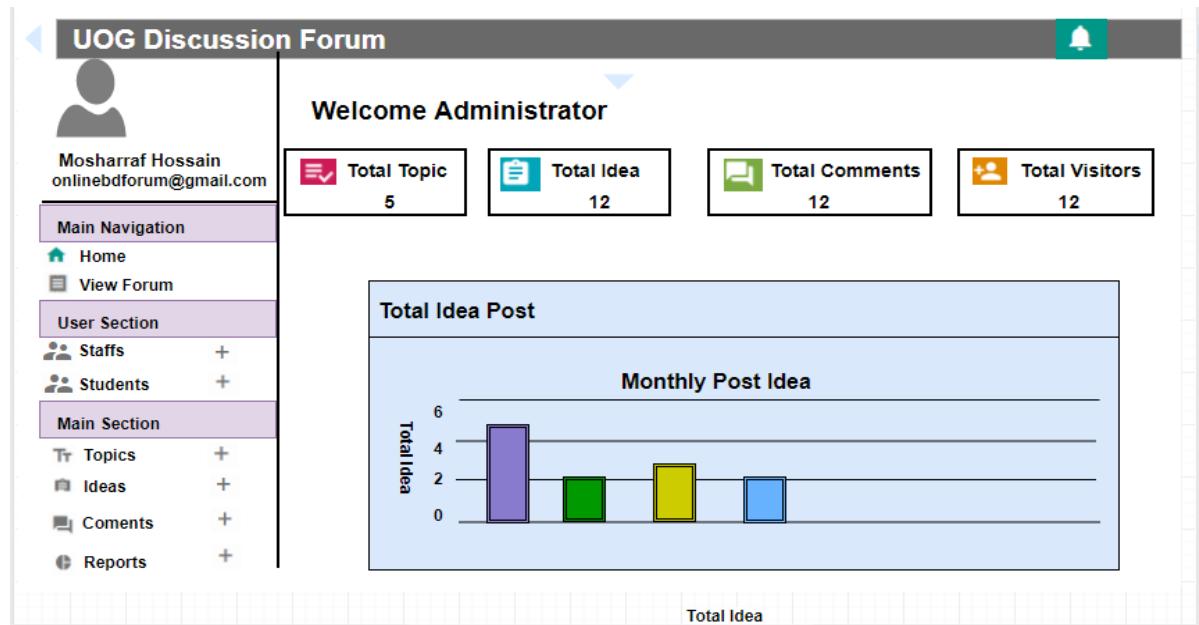


Figure 14: Admin Dashboard

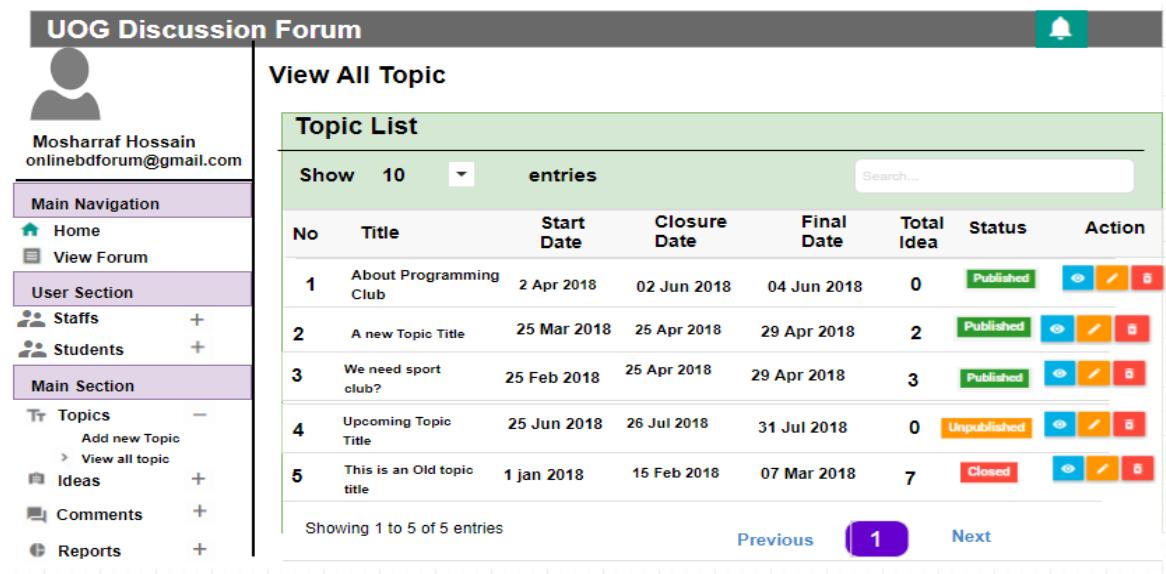


Figure 15: View Topic List

**UOG Discussion Forum**



Mosharrif Hossain  
onlinebdforum@gmail.com

**Main Navigation**

- Home
- View Forum

**User Section**

- Staffs +
- Students +

**Main Section**

- Topics +
- Ideas -
- > View all Ideas
- Comments +
- Reports +

**Idea List**

No	Title	Posted As	Real Name	Posted Date	Views	Status	Action
1	About Programming Club	Anonymous	Salihan Mriday	26 Apr 2018	31	Published	
2	A new Topic Title	Anonymous	Salihan Mriday	26 Mar 2018	11	Published	
3	We need sport club?	Samina Akhter	Samina Akhter	05 Apr 2018	50	Published	
4	Upcoming Topic Title	Anynomous	APu Hasan	26 Jan 2018	11	Published	
5	This is an Old topic title	Anynomous	Mahedi Hasan Rudro	26 Jan 2018	30	Published	

Showing 1 to 10 of 12 entries

Previous << 1 2 Next

Figure 17: View Idea List

**UOG Discussion Forum**



Mosharrif Hossain  
onlinebdforum@gmail.com

**Main Navigation**

- Home
- View Forum

**User Section**

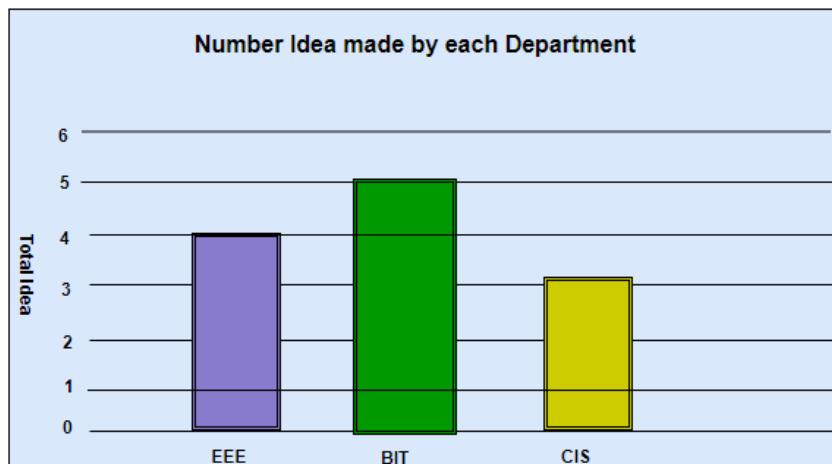
- Staffs +
- Students +

**Main Section**

- Topics +
- Ideas +
- Comments +
- Reports -
- > Department wise idea

**Number of Idea**

**Number Idea made by each Department**



Department	Total Idea
EEE	4
BIT	5
CIS	3

Figure 16: View Chart of all the posted idea by Department

For More Information Visit below Repository link:

[https://github.com/mhmohon/the\\_ultimate/tree/master/Web%20Designer](https://github.com/mhmohon/the_ultimate/tree/master/Web%20Designer)

## Appendices- B: Testing

### Intention of Software Application testing:

Testing is required for an effective performance of software application or product. It's important to ensure that application works properly without any kind of failure. The reason of testing is to make sure that the end of the system or product meet all the requirements which it's have. Appropriate testing provide the best quality of the product and stay in the business market.

### Principles of testing:

There are seven types of principles testing. The description of those principles are given below:

- **Presence of Defects:** Testing ensure the defects of the application or product. Even after testing we can't say that the product is full free of defect. It reduces the number of unseen defects in the software.
- **Impossible Exhaustive testing:** Testing the whole thing containing all combinations of input and preconditions is not possible. For accessing and managing risk it is must needed.
- **Early Testing:** In software testing lifecycle early testing is must be started as soon as possible and also should attention on well-defined intents.
- **Defect Clustering:** Few modules contains a large portion of the imperfections found in pre-discharge testing. It indicates the effective failure.

- **Pesticide Paradox:** For overcoming Pesticide Paradox, needs to analysis the test cases often and different tests need to written to exercise different parts of application to catch more faults.
- **Context Dependent:** Testing is mainly context depending. Different sites tested differently.
- **Absence of errors Fallacy:** Built useless system and does not please the client's and not fulfill the all requirements then finding and fixing errors are useless.

<http://istqbexamcertification.com/what-are-the-principles-of-testing/>

## Key Test Assumptions:

There are some test assumptions that must be focused while the testing is running on.

Those assumptions are described below:

- Appropriate data should be used during the relevant testing processes.
- Testing processes will be gradually checked by the tester and tester can choose a well-suited person to carry out processes as an alternative.
- All types of suggestions, queries, helps and doc file of the system will be given by the tester during the testing processes.

## **List of Testing:**

1. Integration Testing
2. Security Testing
3. Crows Browser Testing
4. Validation Testing
5. Responsive Testing
6. Performance Testing
7. Functionality Testing
8. Compatibility Testing
9. Usability Testing
10. Database Testing
11. Block unauthorized Testing
12. SQL Injection Testing
13. Crowd Testing

## Test Plan:

The test design is an imperative part of executing the test effectively. There is different programming testing accessible for testing part. Keeping in mind the end goal to accomplish better outcome required to make an arrangement for testing.

Before beginning the test I have made some rundown of criteria that going to check in this framework. The test design is given beneath –

Test No.	Test Name	Specification	Expected Outcome
1.	Security Testing	SQL injection Encrypted password URL checking Valid user access	Expected result is show properly all those things.
2.	Crows Browser Testing	Google Chrome Mozilla Firefox Internet Explorer Opera Browser	Will be overcome the test clearly.

3.	Validation Testing	Login validation Accomplish session validation Form validation Upload varieties validation	Testing will be completed with success.
4.	Responsive Testing	Check smart phones view with 1920 x 1080 pixels Check Laptop and Desktop view size Check all tabs screen size view	Will be run on all those screen.
5.	Performance Testing	In this section system performance will be implemented by checking its performance.	Acquire a good result.
6.	Functionality Testing	Login test Authenticate Dashboard Check post idea and view it Check Student Profile view View all the reports	All functions will be ran properly.
7.	Compatibility Testing	Tried server OS platforms for testing	Will be a good report.

8.	Usability Testing	Search bar check Notification bar check Check images, font type and size Check instruction of all pages.	Will work all those things
9.	Database Testing	Data insertion Data Update and Delete Password encrypted	Functions will work.
10.	Block unauthorized Testing	If the system can't match data with user input. The system will block those user for 18 second.	Show a message for blocking the user.
11.	SQL Injection Testing	Check for injection attack	Will be prevent from this attack

## Attempting Testing:

Those testing are attempting for the application which are given below:

## Security Testing:

Security testing is a process to determine that an information system protects data and maintain functionality as intended. It confirms that the program is restricted access to authorize. Security testing of the this system is given below –

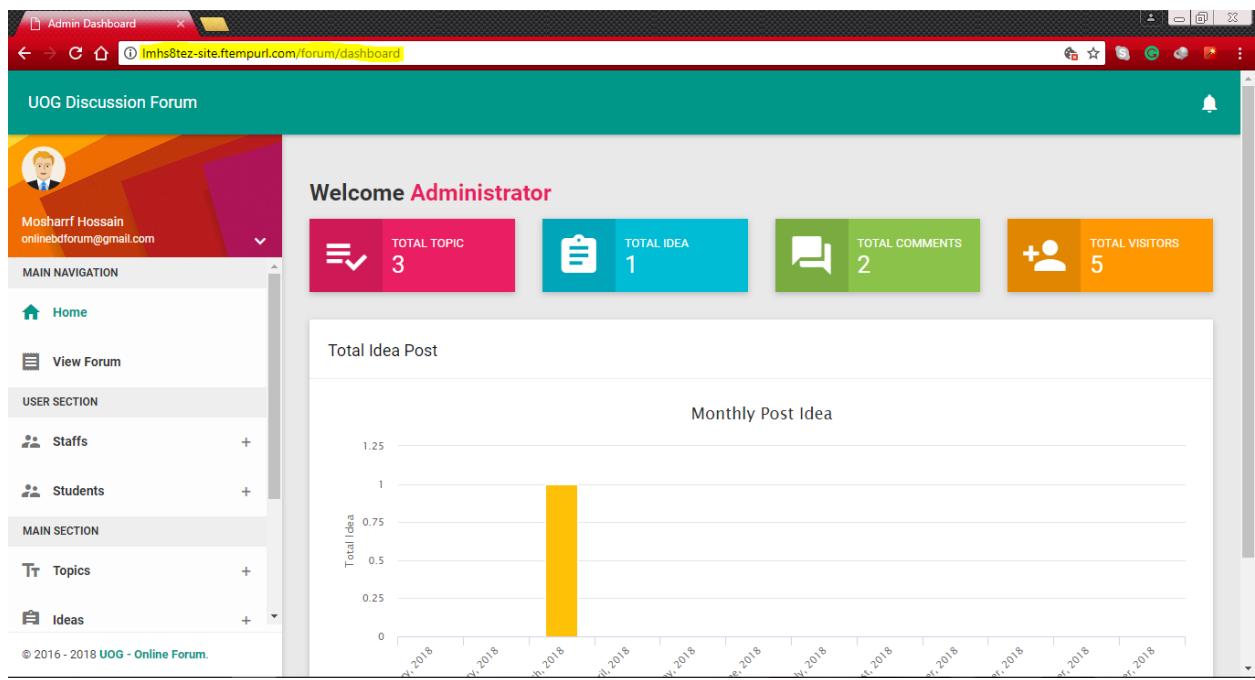
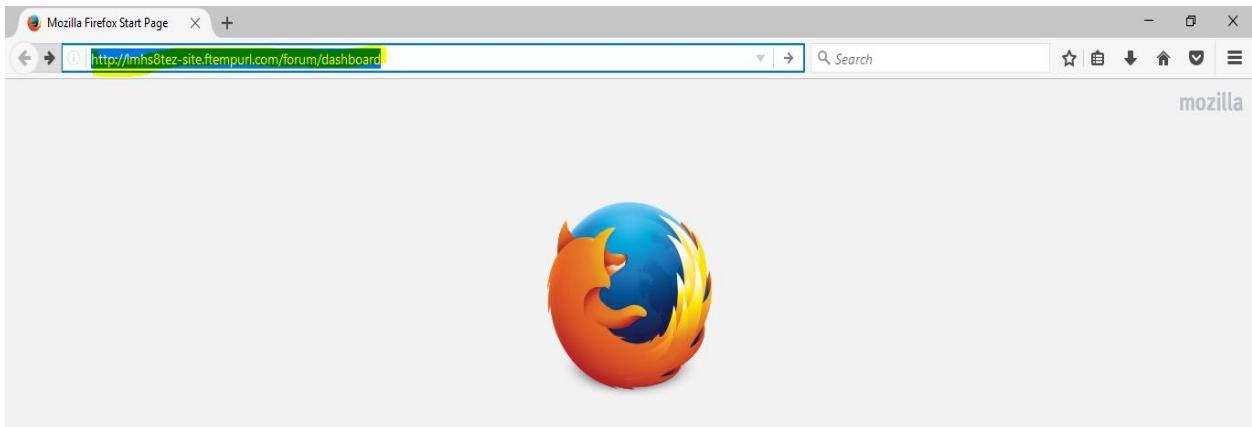
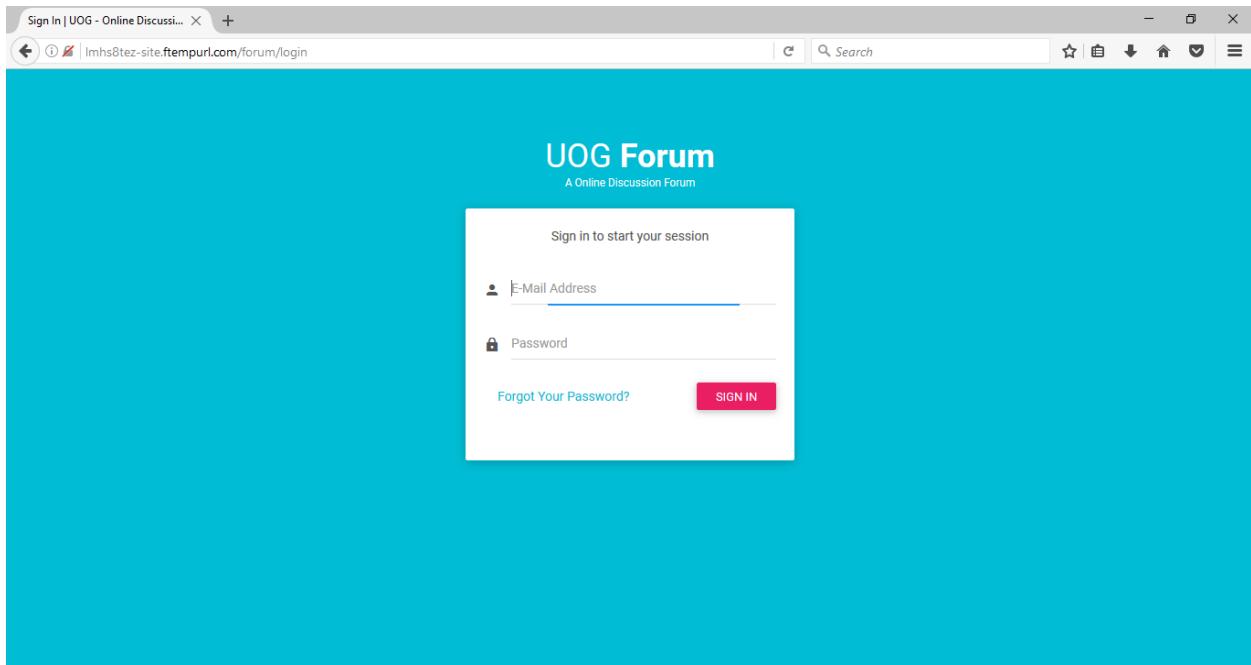


Figure 18: Admin Dashboard after login



**Figure 19: Copy URL and paste it Mozilla Browser**



**Figure 20: Showing Login page**

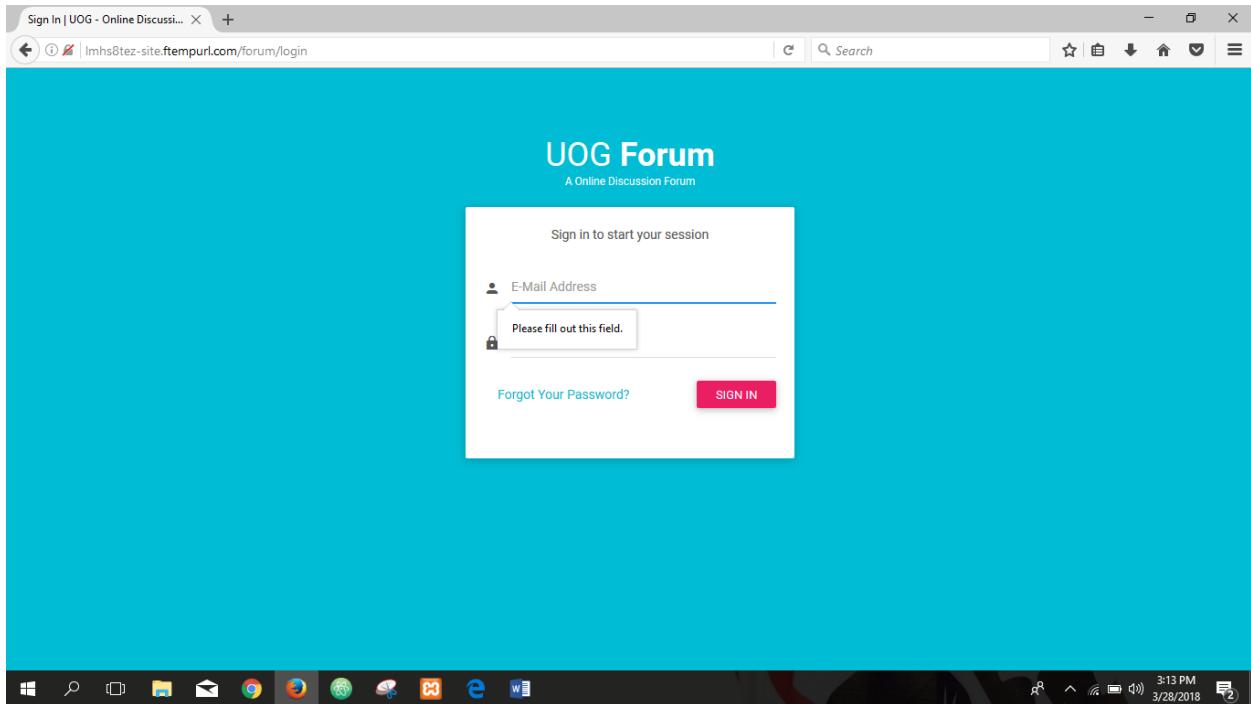


Figure 21: Field can't be blanked

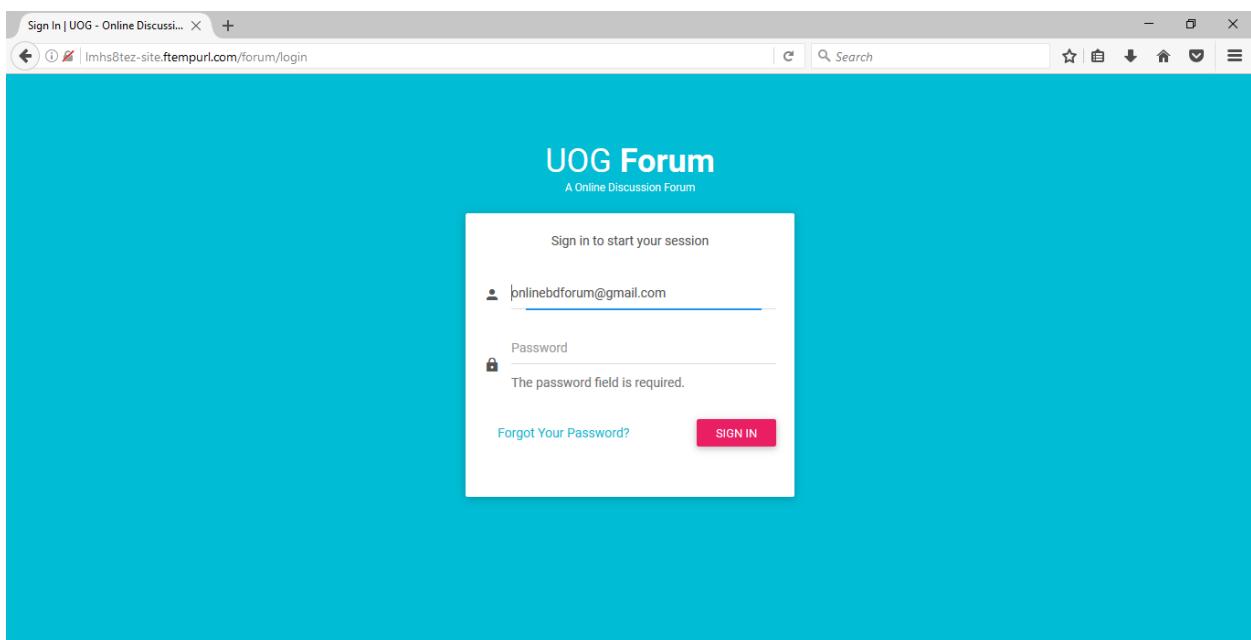
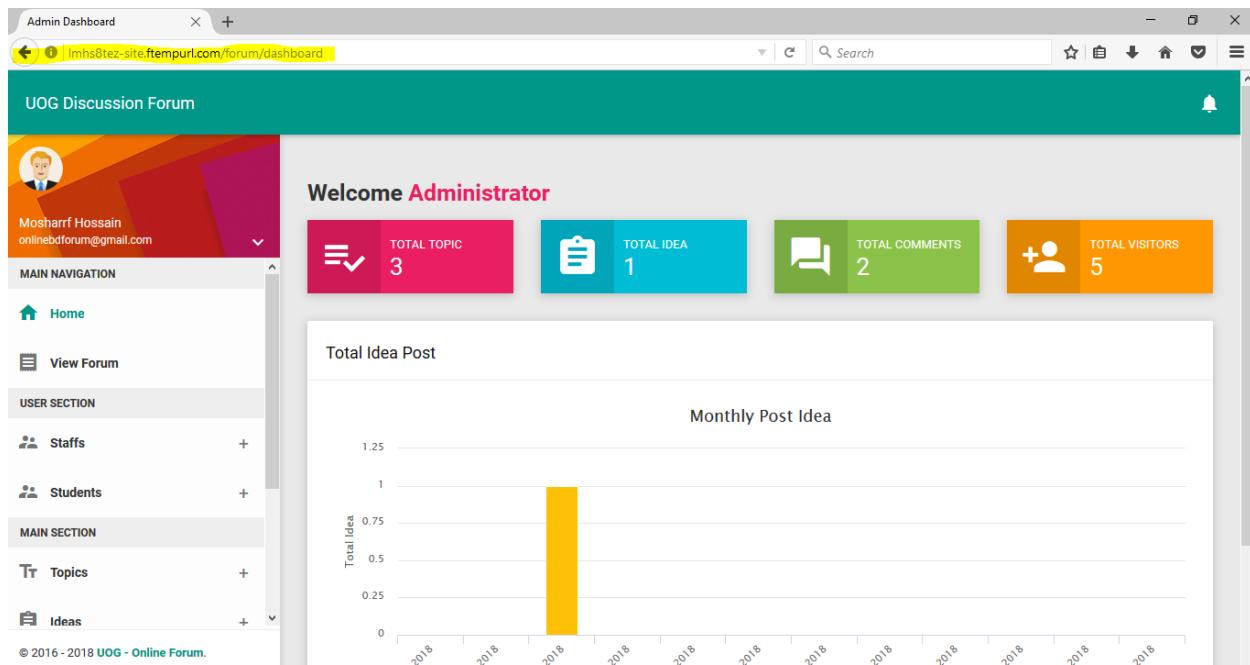


Figure 22: Password can't be blanked



**Figure 23: Successfully Login after giving all correct information**

### Cross Browser Testing:

Cross Browser testing is a process to test web applications across multiple browser. It checking compatibility and ensure that web application works correctly across the different web browser. Some web browser testing of my application is given below:

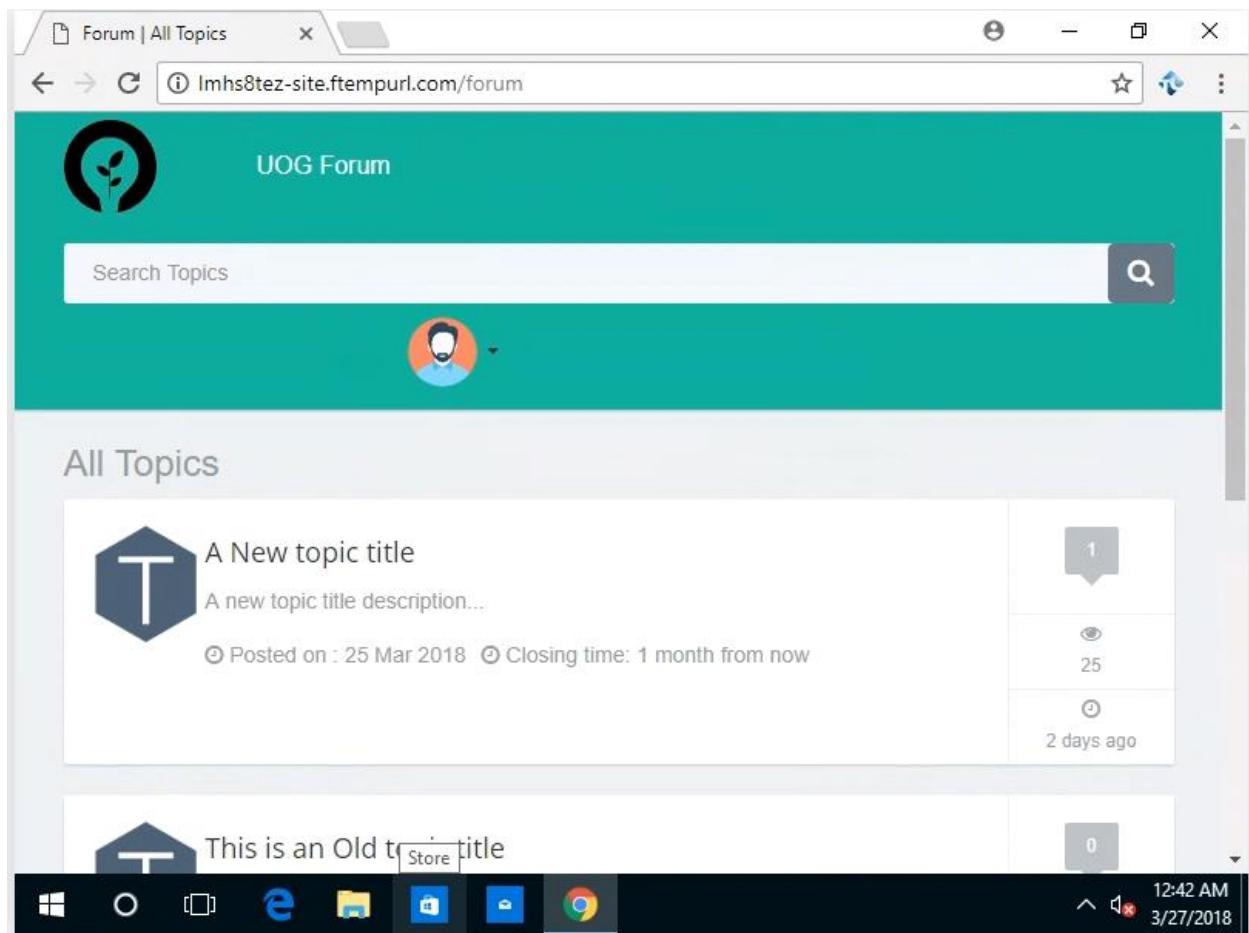
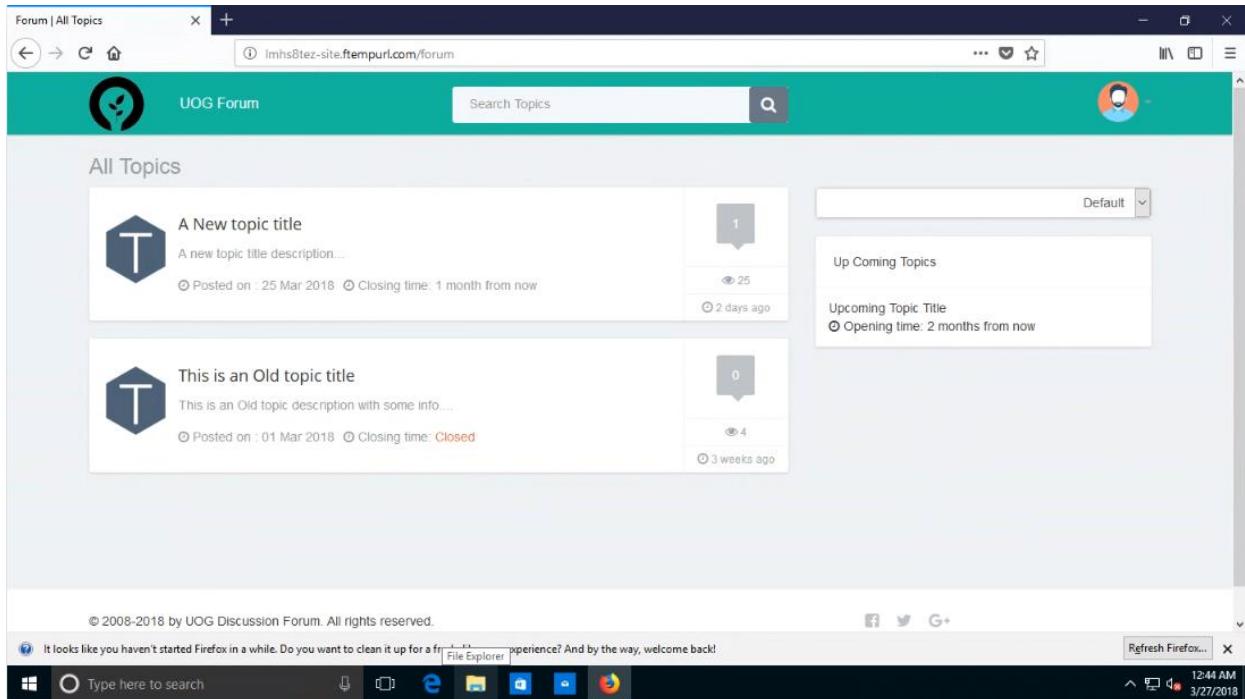
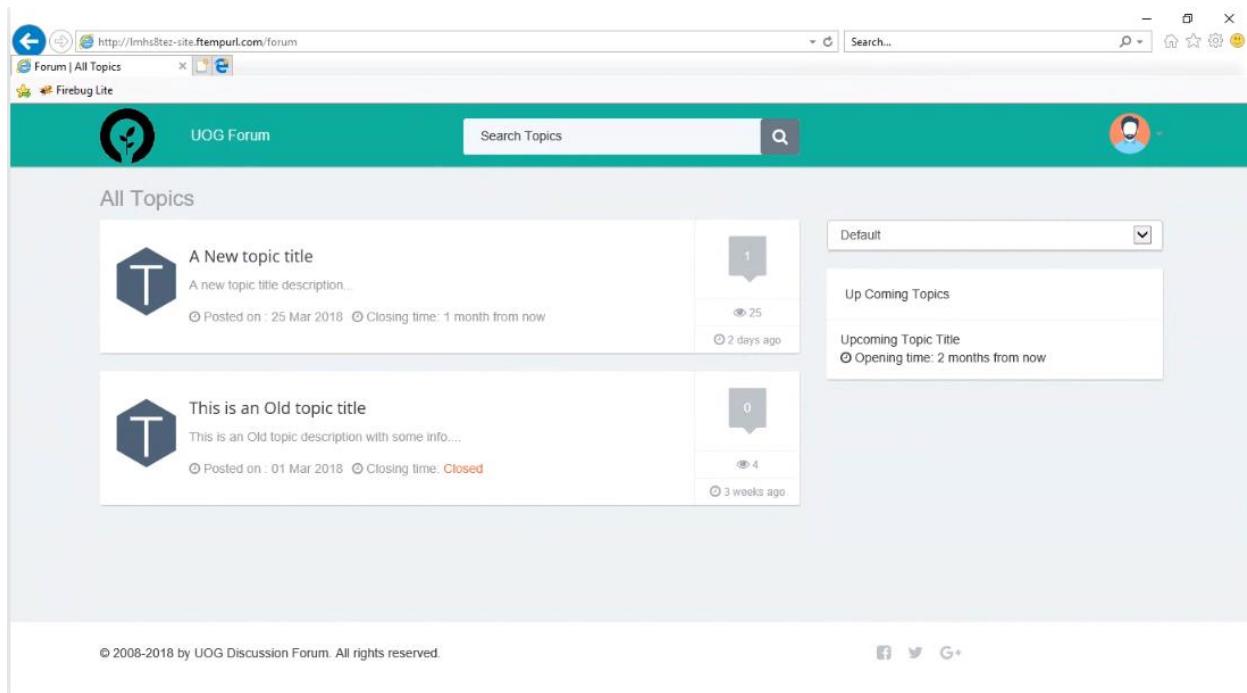


Figure 24: Google Chrome



**Figure 25: Mozilla Firefox browser**



**Figure 26: Internet Explorer browser**

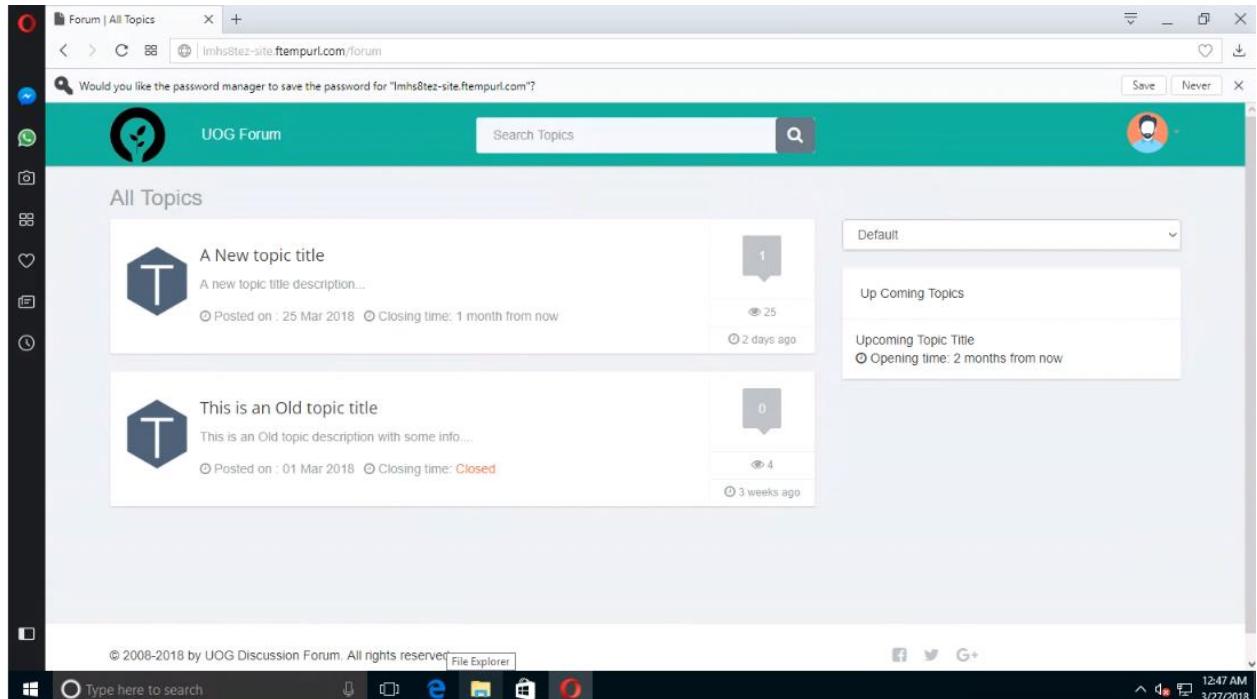
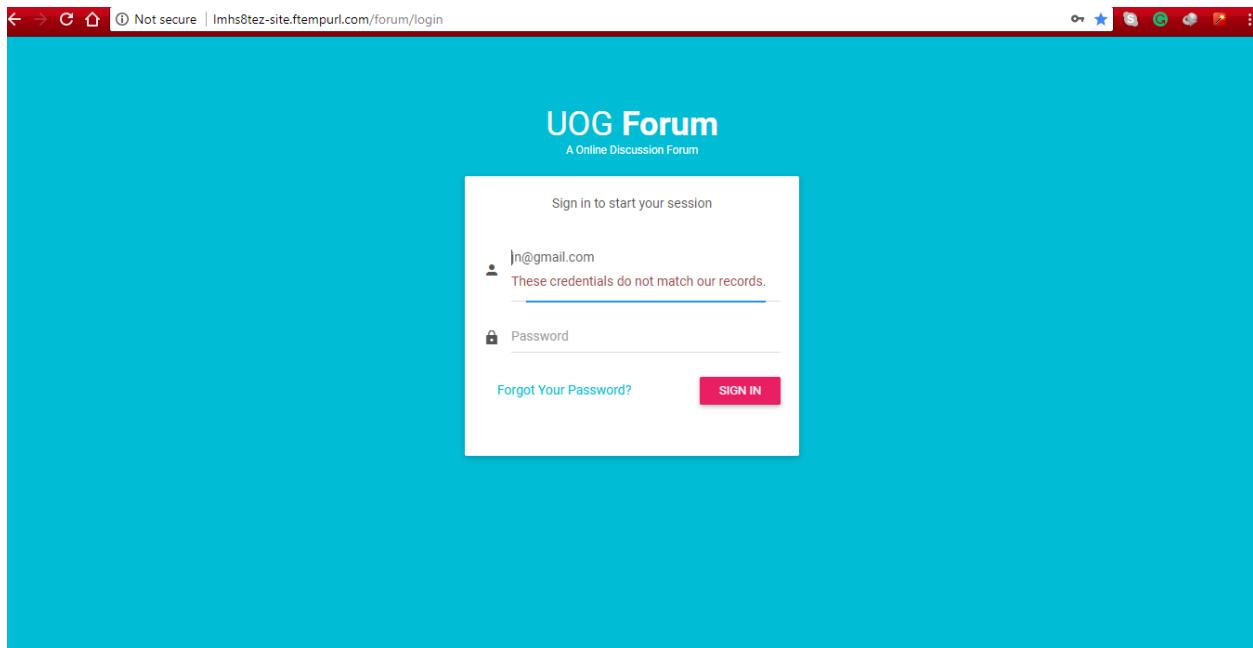


Figure 27: Opera browser

### **Validation Testing:**

The Process of evaluating software during the development process or after the completing all the processes. It ensure that the product meet the requirements which is required and accomplishes functional purposes. Validation testing is must needed for testing for an application. Major validation test of the program is given below –



*Figure 28: Not valid Email Address check*

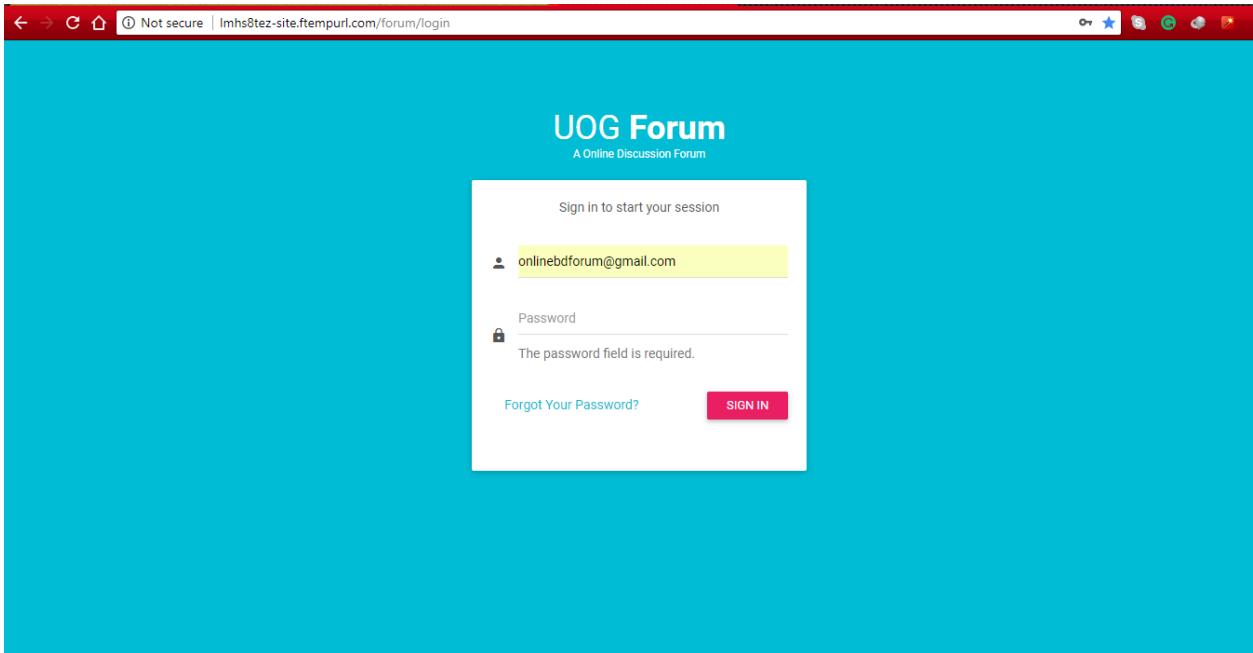


Figure 29: Password Field can't be blank

A screenshot of a web browser displaying the UOG Discussion Forum topic creation form. The URL in the address bar is "lmhs8tez-site.ftempurl.com/forum/dashboard/add/topic". The left sidebar shows a user profile for "Mosharrif Hossain" and navigation links for "Topics", "Add New Topic", "Ideas", "Comments", "Reports", and "My Profile". The main content area has a teal header with "UOG Discussion Forum". The "Topic Form" section contains several input fields with validation messages: "Topic Title" (error: "Topic name has to be an alphanumeric value (3-255 chars)"), "Description" (error: "This is a required field"), "Start Date" (error: "Please choose a date" and "This is a required field"), "Closure Date" (error: "Please choose a date" and "This is a required field"), "Final Closure Date" (error: "Please choose a date" and "This is a required field"), and "Publication Status" (error: "Deactive"). Each validation message is preceded by a red "X" icon.

Figure 30: If field is blanked then validation message will show

The screenshot shows a web browser window for the 'UOG Discussion Forum'. The title bar says 'Add new Topic' and the address bar shows 'Not secure | lmhs8tez-site.ftempurl.com/forum/dashboard/add/topic'. The main content area is titled 'Topic Form'. It contains several input fields:

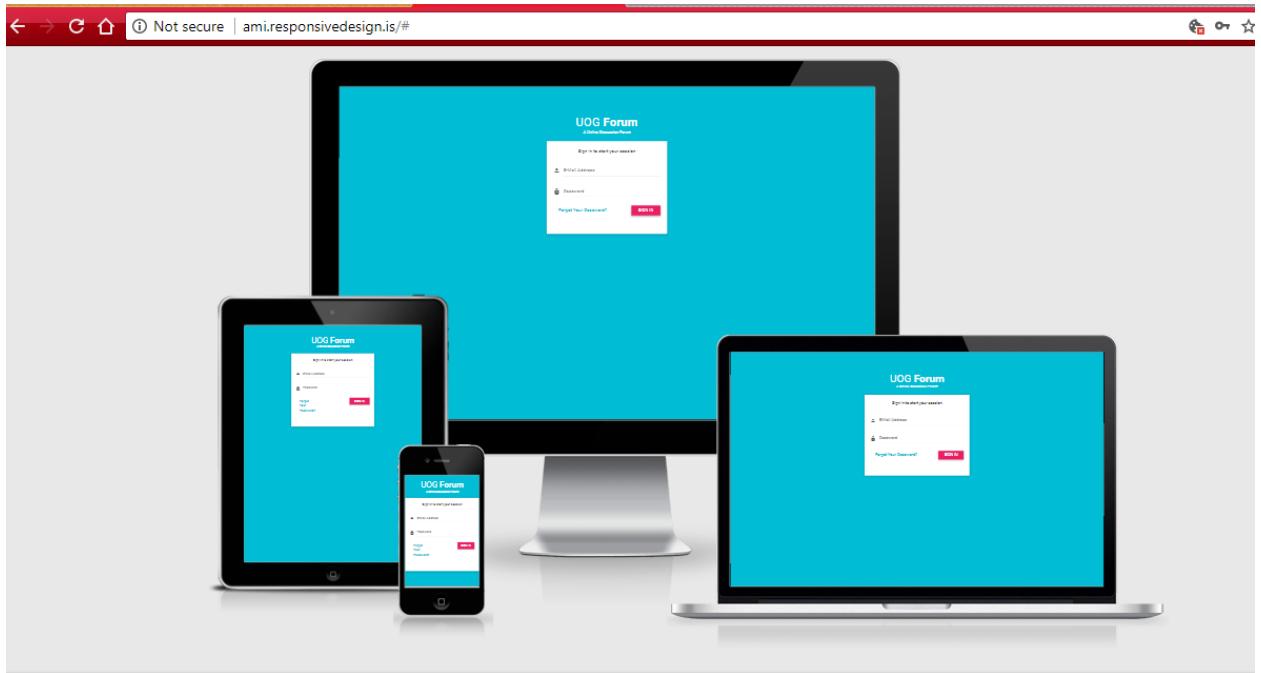
- Topic Title:** NE (highlighted in yellow) - Error message: 'Topic name has to be an alphanumeric value (3-255 chars)'.
- Description:** Type topic description
- Start Date:** Please choose a date
- Closure Date:** Please choose a date
- Final Closure Date:** Please choose a date
- Publication Status:** Deactive

At the bottom right of the form is a blue 'Add Topic' button.

**Figure 31: Topic Title must be in 3 Words**

## Responsive Testing:

It is an approach to design intended at creating sites to provide a best viewing experience like easily reading and navigation with a minimum of resizing, planning and scrolling across a wide range of devices. This system is tested on various devices like computer, laptop, pc, mobile, tablet with the different screened devices and it passed all the tested and run efficiently. In the below a figure is given for this testing-

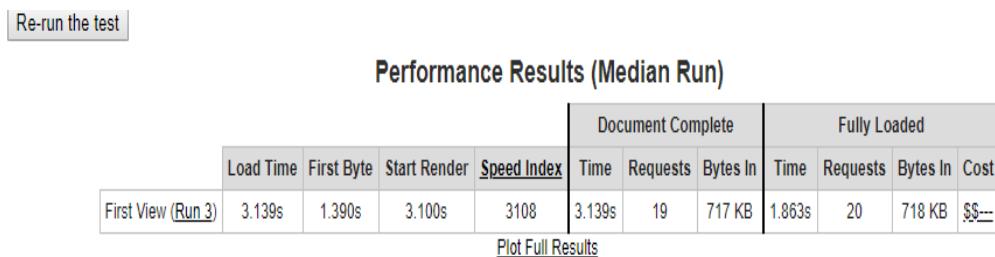


*Figure 32: The system show properly all type of display*

<http://ami.responsivedesign.is/#>

## Performance Testing:

This testing evaluate the response time or speed. Throughput and utilization of the system to execute its required functions in comparison with different versions of the same product which is called as a Performance testing. In the below there is given of my application performance-



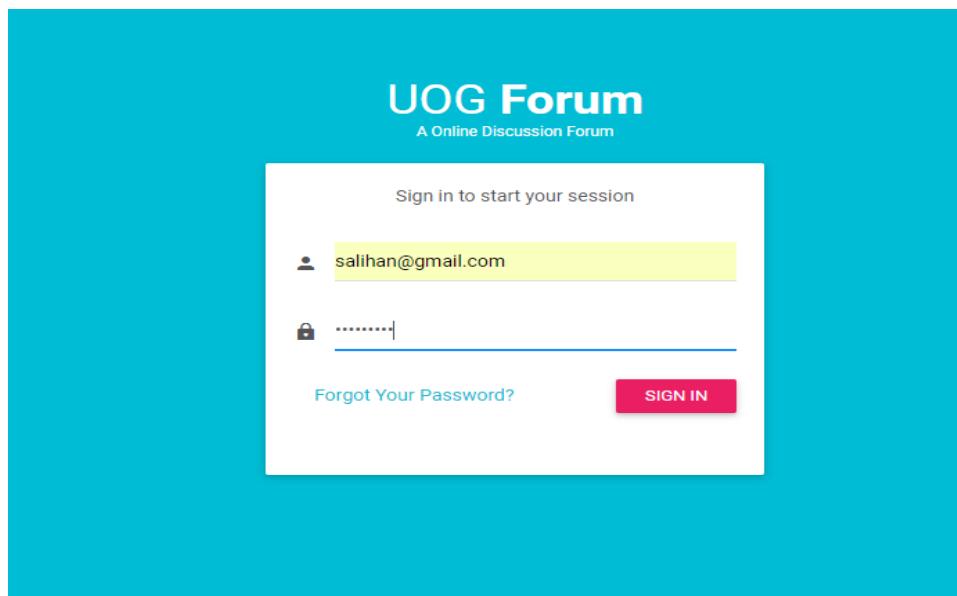
*Figure 33: Performance Testing*



*Figure 34: Performance Testing PIE Chart*

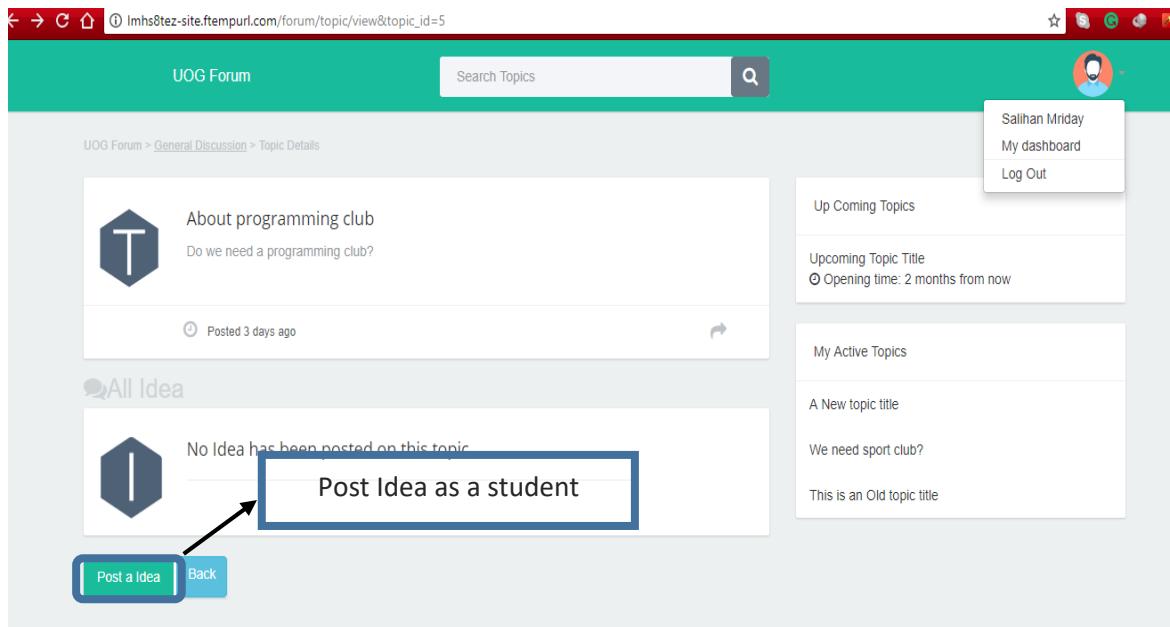
### Functionality Testing:

It's a process used within software development in which software is tested to ensure that it confirms with all requirements. It's a way off checking software to ensure that it has all the required functionality that specified within its functional requirements. Some of the functional testing of the system is given below –



**Figure 35: Student user name and password entered**

**Figure 36: Login Successful in student user Interface**



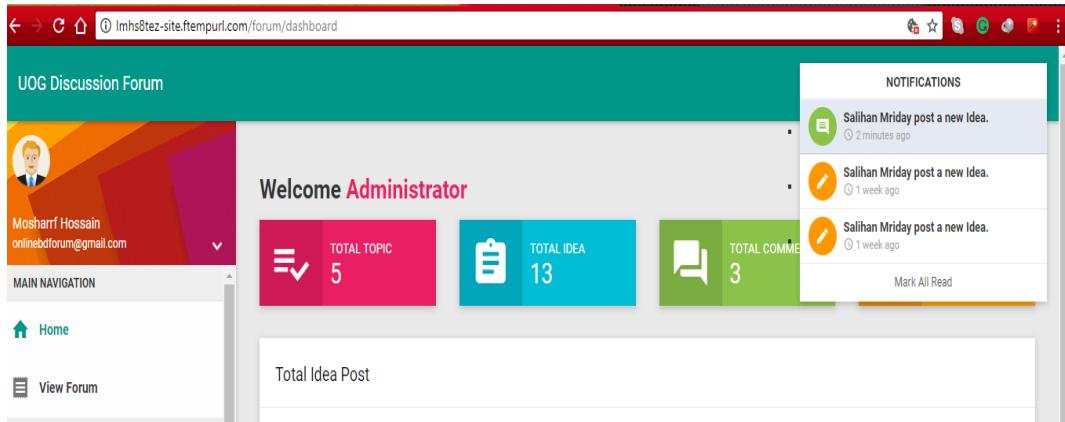
**Figure 37: Select idea button for posting idea under a topic**

The screenshot shows the 'UOG Forum' interface. At the top, there is a navigation bar with 'UOG Forum', a search bar, and a user profile icon for 'Salihah Mriday'. A dropdown menu from the profile icon includes 'My dashboard' and 'Log Out'. Below the navigation, the URL 'UOG Forum > Topic Details > Add Idea' is visible. The main content area displays a topic titled 'About programming club' with the subtitle 'Do we need a programming club?'. It was posted 3 days ago. Below this, there is a text editor window with a toolbar and a red banner at the top stating 'Unlicensed copy of the Froala Editor. Use it legally by purchasing a license.' The editor contains the text 'Different types of programming contest can be held here.' A progress bar indicates 56% completion. At the bottom, there are options to 'Post As: Real user' or 'Anonymous', a checkbox for 'I agree to the Terms and Conditions', and a green 'Post Idea' button.

**Figure 39: Insert Idea Title, description, real name or anonymous**

The screenshot shows the 'UOG Forum' interface. At the top, there is a navigation bar with 'UOG Forum', a search bar, and a user profile icon for 'Salihah Mriday'. A dropdown menu from the profile icon includes 'My dashboard' and 'Log Out'. A green banner at the top states 'Your Idea has been posted, Waiting for Admin Approval!'. Below the banner, the URL 'UOG Forum > General Discussion > Topic Details' is visible. The main content area displays the same topic as Figure 39: 'About programming club' with the subtitle 'Do we need a programming club?'. It was posted 3 days ago. To the right, there is a sidebar with sections for 'Up Coming Topics' (listing 'Upcoming Topic Title' and 'Opening time: 2 months from now'), 'My Active Topics' (listing 'About programming club', 'A New topic title', 'We need sport club?', and 'This is an Old topic title'), and a 'All Idea' section which says 'No Idea has been posted on this topic.' At the bottom, there are 'Post a Idea' and 'Back' buttons.

**Figure 38: Idea will be posted after admin approval**



**Figure 40: Admin get notification for new idea**

The screenshot shows the 'View All Idea' page. A green banner at the top says 'Idea updated successfully!'. Below it is a table titled 'Idea List' with columns: No., Title, Posted as, Real Name, Posted date, Views, Status, and Action. The second row, which has a yellow background, represents an idea titled 'Programming Contest...' posted by Salihan Mriday on 05 Apr 2018 with 0 views and a status of 'Published'. The other four rows have white backgrounds.

No.	Title	Posted as	Real Name	Posted date	Views	Status	Action
1	No we don't need...	Anonymous	Salihan Mriday	26 Apr 2018	31	Published	
2	Programming Contest...	Salihan Mriday	Salihan Mriday	05 Apr 2018	0	Published	
3	A idea title new...	Samina Ahkter	Samina Ahkter	05 Apr 2018	50	Published	
4	This is a test idea title (rea...	Anonymous	Salihan Mriday	26 Mar 2018	11	Published	
5	I love this Topic...	Mahedi Hasan Rudro	Mahedi Hasan Rudro	26 Mar 2018	40	Published	

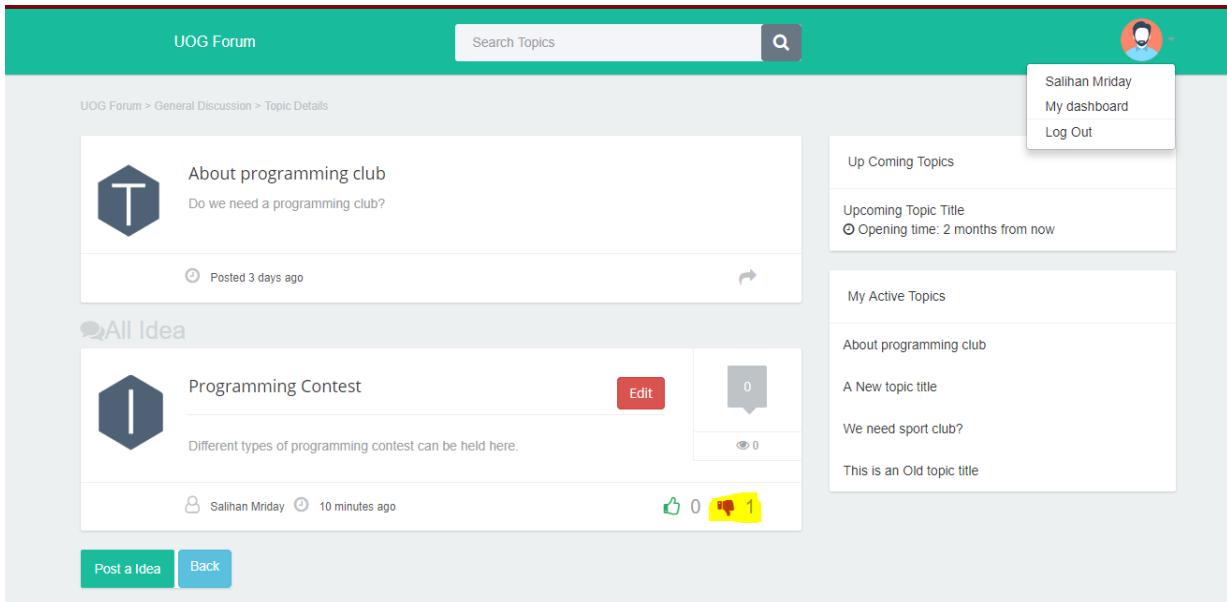
**Figure 41: Admin Approve the Idea**

The screenshot shows the UOG Forum interface. At the top, there is a navigation bar with the title "UOG Forum" and a search bar labeled "Search Topics". On the right side, a user profile for "Salihan Mriday" is displayed with options to "My dashboard" and "Log Out". Below the navigation bar, the page shows "General Discussion > Topic Details". A topic titled "About programming club" is listed, followed by a new idea titled "Programming Contest" posted by Salihan Mriday 10 minutes ago. The idea has 0 likes and 0 dislikes. To the right, a sidebar titled "Up Coming Topics" lists "Upcoming Topic Title" with an opening time of "2 months from now". Another sidebar titled "My Active Topics" lists several topics including "About programming club", "A New topic title", "We need sport club?", and "This is an Old topic title". At the bottom left, there are buttons for "Post a Idea" and "Back".

**Figure 42: Idea Successfully Posted**

This screenshot is similar to Figure 42, showing the same forum interface. The "Programming Contest" idea has been interacted with, as indicated by the yellow highlight on the "Like" button, which now shows the value "1". The other statistics remain at 0. The rest of the page content, including the sidebar and navigation bar, is identical to Figure 42.

**Figure 43: Give Thumbs Up for the Idea**



**Figure 44: Can give Thumbs Down for Idea**

### **Compatibility Testing:**

This software testing is used to ensure compatibility of the system built with various objects such as other web browser, hardware platforms, and user's requirements.

### Usability Testing:

It's a technique used in user-centered interaction design to evaluate a product by testing it on user. This can be seen as an irreplaceable usability practice when it gives direct input on how real users use the system. Particular testing of usability is given below –

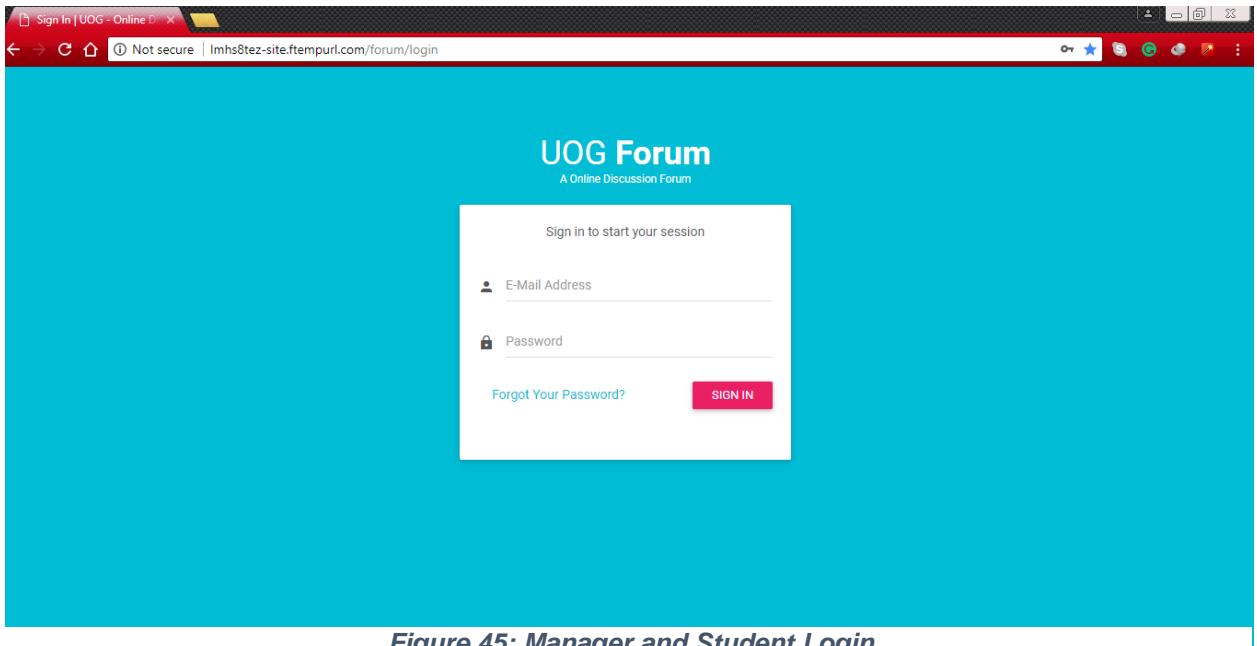


Figure 45: Manager and Student Login

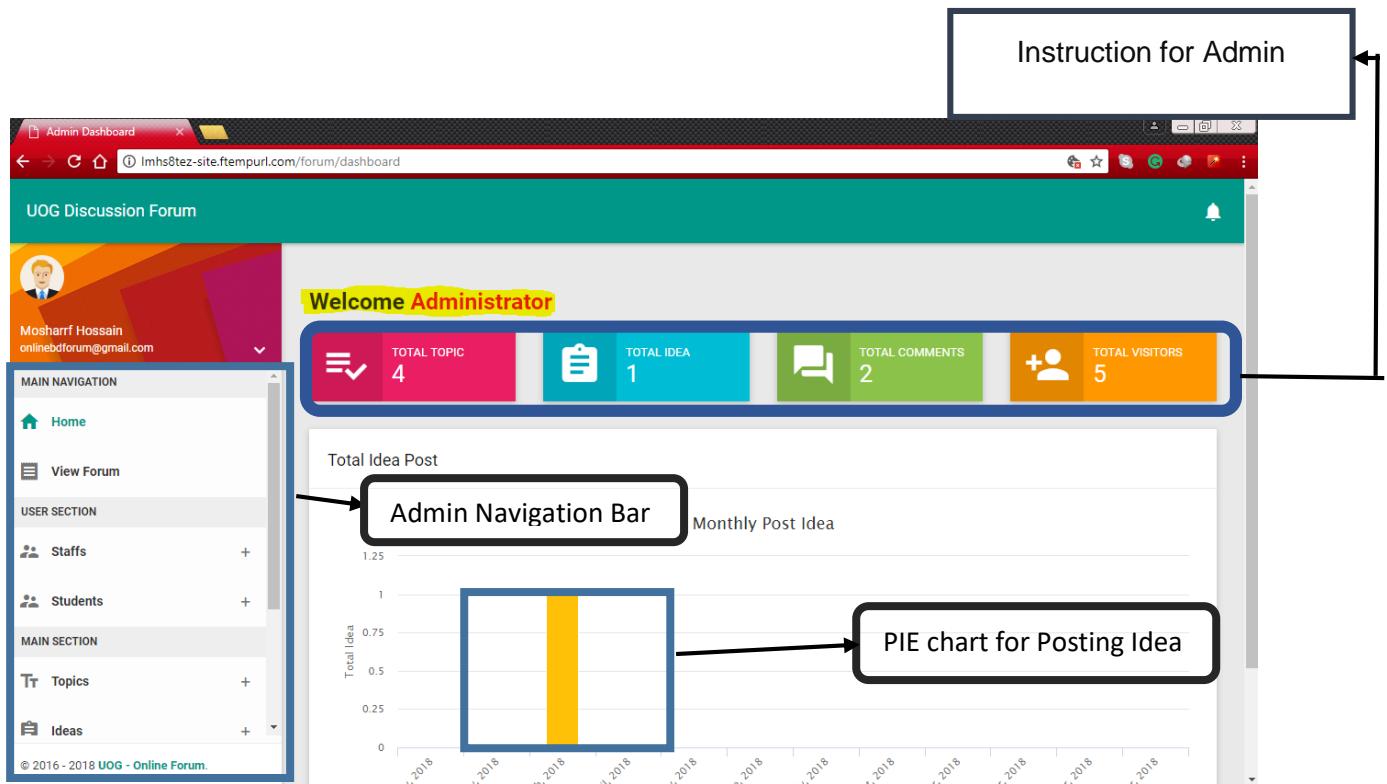
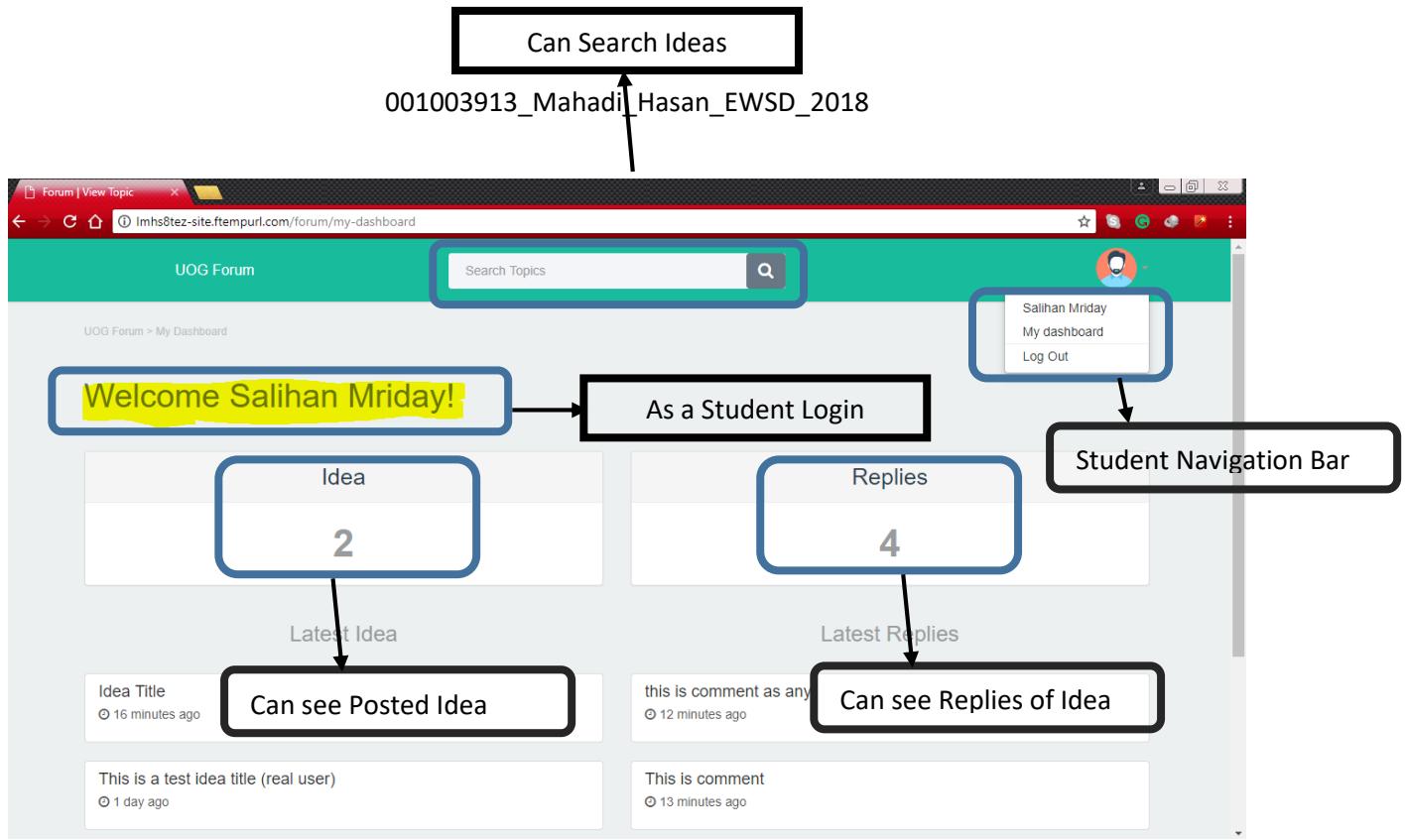


Figure 46: All Functions are available here for Admin to manage

The screenshot shows the Admin Dashboard of the UOG Discussion Forum. On the left, there's a sidebar with user information (Mosharrif Hossain, onlinebdforum@gmail.com) and navigation links for Home, View Forum, Staffs, Students, Topics, and Ideas. The main area displays a welcome message 'Welcome Administrator' and three summary cards: 'TOTAL TOPIC 4', 'TOTAL IDEA 2', and 'TOTAL COMMENT 4'. To the right, there's a 'NOTIFICATIONS' panel with a list of recent activity: 'No New Notification.' (0 mins ago), 'anonymous post a new Idea.' (13 minutes ago), 'Salihan Mriday post a new Idea.' (1 day ago), and 'Salihan Mriday post a new Idea.' (2 days ago). A blue rounded rectangle highlights this notifications panel. Below it, a black arrow points down to a black-bordered box labeled 'Notification Bar for Admin'. The background features a chart titled 'Total Idea Post' with a single yellow bar at the value of 2, corresponding to the date '11-2018'.

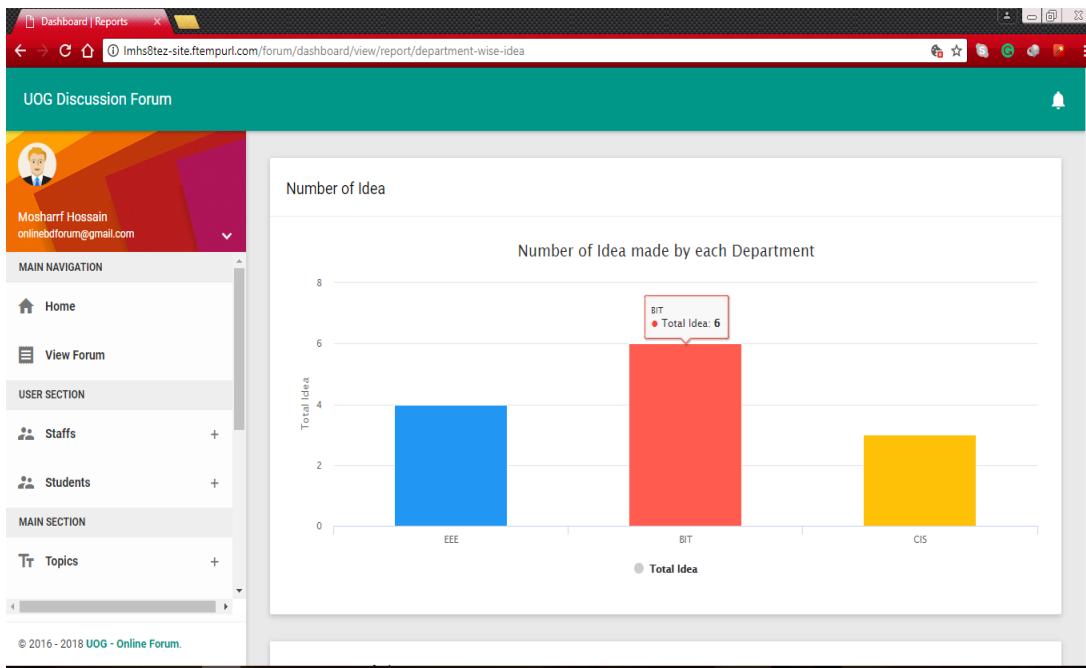
**Figure 47: Notification bar for Admin**



**Figure 48: Correct Student Managing functional are available here**

## Database Testing:

This testing involves the database connect successfully to the system. It performs module testing of database functions, triggers, views, SQL queries. It validated database tables, data models, database schema etc. Determining system by CRUD which more efficient database. Particular database testing of the system is shown here –



**Figure 49: Successfully connected to the system**

The screenshot shows the phpMyAdmin interface with the following details:

- Toolbar:** Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, Tracking, Triggers.
- Message Bar:** "Show query box" and a warning message: "Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available." (with a small help icon).
- Status Bar:** "Showing rows 0 - 1 (2 total, Query took 0.0156 seconds.)".
- Query Result:**

```
select s.dep_id, count(i.id) as "number of ideas" from ideas as i, users as u, students as s where u.id = i.user_id and u.id = s.user_id group by s.dep_id
```

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
- Table View:** Shows a table with two rows:

dep_id	number of ideas
1	3
2	1

**Figure 50: Query run successfully in the database**

The screenshot shows the phpMyAdmin interface with the following details:

- Left Sidebar:** Database tree showing databases like discussion, users, etc.
- Current Database:** discussion
- Table:** users
- Message Bar:** "Showing rows 0 - 5 (6 total, Query took 0.0006 seconds.)".
- SQL Query:** "SELECT \* FROM 'users'"
- Table View:** Shows a table with 6 rows. The password column is highlighted with a red box and a blue arrow pointing to it, labeled "Password Encrypted".

	<th>email</th> <th>password</th> <th>user_role</th> <th>user_status</th>	email	password	user_role	user_status
1	1	onlinebdforum@gmail.com	\$2y\$10\$JsKCHC1XOOQx/bFjcfjuHluUPrfrxnVJHI2Soc3n...	1	1
2	2	shatu@gmail.com	\$2y\$10\$D.v9lsPMvfhfEPgSl.88kjRbAw7epQzh3i2Rm...	2	1
3	3	mohan.dit33@gmail.com	\$2y\$10\$hyYPq6l9Kv.h1YL6dlrO7inaySsrphA.SU2h2675...	3	1
4	4	apu@gmail.com	\$2y\$10\$Gt89dawpcdbYjc0PrwtM4eZplPEWGKU/C02Kwlpt94k...	3	1
5	5	mohan.dit65@gmail.com	\$2y\$10\$dz.UJOujZJmFmI0iLQSdOHpDzqjEok6PNGrofqljnY...	5	1
6	6	mohan.dit45@gmail.com	\$2y\$10\$dz.UJOujZJmFmI0iLQSdOHpDzqjEok6PNGrofqljnY...	5	1

**Figure 51: Encrypted password in Database**

### Block unauthorized testing:

It means if any one tried with wrong information can't access in the system as well as uncertainty a person input wrong information at least 5 times then system will block this unauthorized person for 18 second. Here few testing of it is shown –

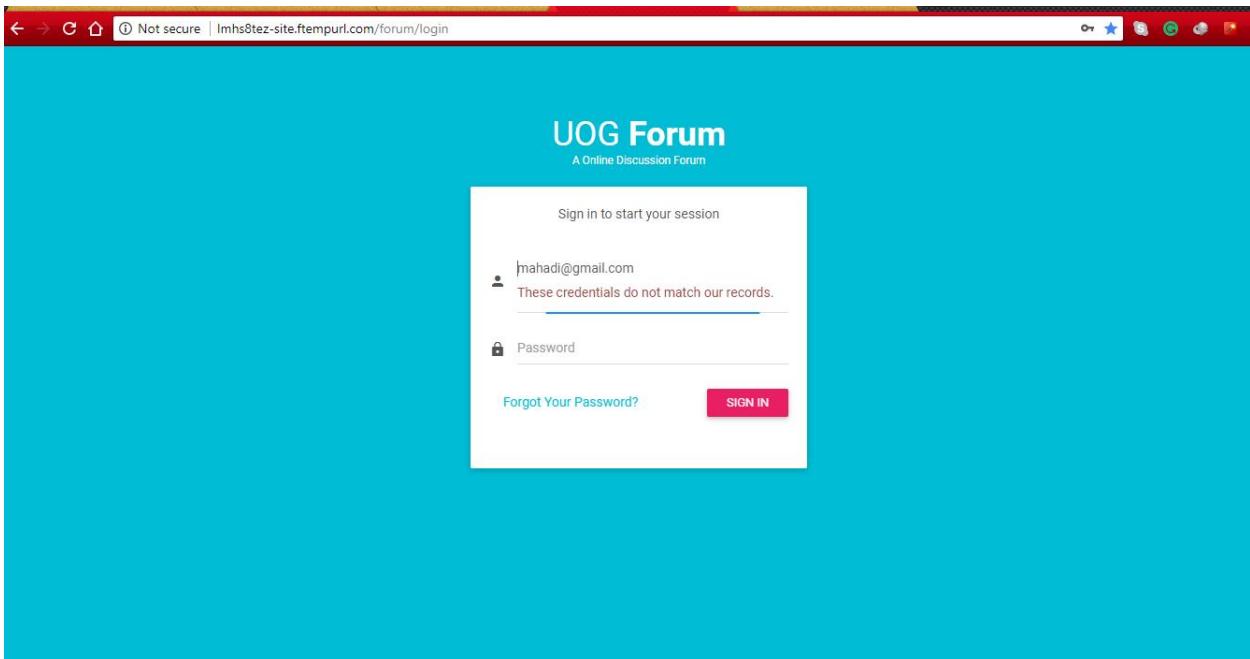
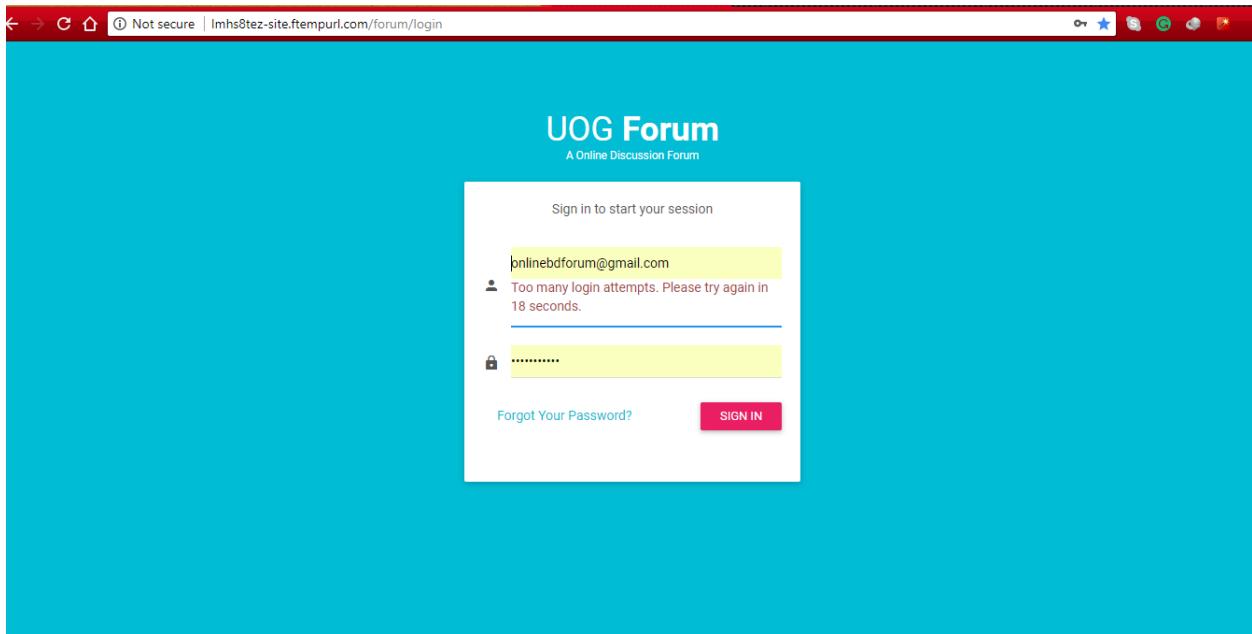


Figure 52: Information doesn't match



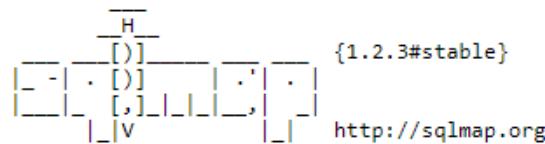
*Figure 53: Block Unauthorized users for few time*

### SQL Injection testing:

This consists of insertion or injection of a SQL query via the input data from the client to the application. This testing is need for seeing how much my database is strong enough to protect attack.

### Report

---



```
[!] legal disclaimer: Usage of sqlmap for attacking targets without prior mutual consent is
illegal. It is the end user's responsibility to obey all applicable local, state and federal
laws. Developers assume no liability and are not responsible for any misuse or damage caused
by this program

[*] starting at 20:00:40

[20:00:40] [WARNING] unable to create output directory '/srv/http/.sqlmap/output' ([Errno 13]
Permission denied: '/srv/http/.sqlmap'). Using temporary directory
'/tmp/sqlmap4G06mG6384/sqlmapoutputsp2K3w' instead
[20:00:40] [INFO] testing connection to the target URL

sqlmap got a 302 redirect to 'http://lmhs8tez-site.ftempurl.com/forum'. Do you want to
follow? [Y/n] Y
[20:01:00] [INFO] checking if the target is protected by some kind of WAF/IPS/IDS
[20:01:05] [INFO] testing if the target URL content is stable
[20:01:10] [CRITICAL] no parameter(s) found for testing in the provided data (e.g. GET
parameter 'id' in 'www.site.com/index.php?id=1')

[*] shutting down at 20:01:10
```

*Figure 54: SQL Injection Test Report*

**Crowd Testing:**

This testing is directed by analyzer in related with a gathering of non-specialized individual. This follows how the gathering tell about the item and their input about your product. Additionally guarantee the execution, convenience of the framework from their point of view on the off chance that they can rest easy.

**Test log:**

<b>Test NO.</b>	<b>Test Name</b>	<b>Specification</b>	<b>Outcome</b>	<b>Result</b>
1.	Integration Testing	Integration of the system has been checked	Under control the test effectively	Passed
2.	Security Testing	Check all the security test for the system	Many other test is occurred here and passed successfully	Passed
3.	Crows Browser Testing	Different browser screen tested for the system	Overcome the test positively	Passed
4.	Validation Testing	Exact Validation of the system is tested and established	Testing is complete with success	Passed
5.	Responsive Testing	Several screen resolution confirmed for responsiveness	Verified in all test with effortlessly.	Passed
6.	Performance Testing	Online implements are tired for this testing	Well passed	Passed
7.	Functionality Testing	Functions of the system work well	Verified successfully	Passed

8.	Compatibility Testing	Tried server OS platforms for testing		Passed
9.	Usability Testing	Test usability for the system efficiently	Tested very smoothly and succeed in testing	Passed
10.	Database Testing	Check all the section efficiently	Tried constantly with success	Passed
11.	Block unauthorized Testing	Checking for Security purpose	Passed in this test part.	Passed
12.	SQL Injection Testing	Check for valid query in database.	Good enough in testing	Passed

**For More Information Visit below Repository link:**

[https://github.com/mhmohon/the\\_ultimate/tree/master/Tester](https://github.com/mhmohon/the_ultimate/tree/master/Tester)

## Bibliography

Anton Sergeev, 1999-2010. *UI Designer*. [Online]

Available at: [http://ui-designer.net/interface\\_design.htm](http://ui-designer.net/interface_design.htm)

[Accessed 7 April 2018].

usability.gov, 2018. *usability.gov*. [Online]

Available at: <https://www.usability.gov/what-and-why/user-interface-design.html>

[Accessed 6 April 2018].