



HUMAN-COMPUTER-INTERACTION **EXAM UNIT WEB Application**

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Exam Result Finder (ERF)

Introduction - Intro to project

Our project is to create a web application for the examination unit of NSBM GREEN UNIVERSITY.

Our goal: to create an interactive, well functioning online system for students to check their examination result easily.

We used html,css,javascript to design our application.we implemented this system using design principles, usability concepts and other human computer interaction concepts to design our application with the successful interaction.

In our system the user has to login to the system first by entering username and password. Then the user can check for news & notices, result sheets, time table & check for contact details.

Interfaces that we use in our system:-

- Examination rules
- Sign in
- Sign up
- News & notices
- Time table
- Result sheet
- Contact details

Concepts and assumptions

Concept

Our main concept - to design an online, user interactive system for the students to check their examination result. We decided that this system will help the students to know their examination details easily without doing it manually.

Our users - we considered the students on NSBM GREEN UNIVERSITY as our users.

Problems occurred - Making the system according to what students really need from this web Application.

Making the system according to outcomes of this project.

Making the system appropriate for users of all kind(expert,novice

users)

Making the system interactive with the users.

User requirements - Check for results online Check examination details

Tasks involved during the project - prepare a project proposal

Identify the task
Design the interface sketches
Implement the application
Prepare a document

Assumptions

These are the assumption of our system we assumed that our users can understand english language. We assumed that every student have the facility to connect with internet.

Technical specifications

Project Goals - Online results checking

- Online checking of examination details
- Online checking of news and notices

Method use to design the system - CSS
HTML
JAVA SCRIPT
HCI CONCEPTS

Other requirements - internet facilities

Security facilities(use password and username to login)

Task involved - checking examination details

User Profiles and Target User Description
Users - Students
Goals in using the product - Finding out exam details
Tasks involved - Login to the system

- Sign up to the system if the users doesn't have an account
- Check exam time tables
- Check news and notices
- Check result

Relevance

Please describe the following:

2.1 How relevant is your proposal to the needs and constraints of the target country(ies) or region?

We targeted our university (NSBM Green university). Because our group members decided "we should do this for our students" and project limitations always says this project should be in university.

2.2 What are the problems to be resolved and the needs to be met?

We had problems like

- What student really need from this web Application.
- What will be their needs.
- What should be the outcomes of this project.
- How our project going to interact with the students.

2.3 Who are the actors involved (final beneficiaries, target groups)?

Our targeted group is NSBM students and they will be the final beneficiaries.

Methodology and Sustainability

Please describe the following

3.1 What are the main project activities?

We did this as a group. Our main activities were

- Create a project proposal.
- Decided with group members what we are going to do.
- Planed the project.
- We divided work among the project members.
- Implemented part by part.

3.2 Will it have multiplier effects?

It depends on how user going to use the application.

What we use to design this application

- 1) We already did explain about this at the first few pages on this book.
- 2) We are going to use client server architecture to this web application. But assignment ask only for the user interfaces so we thought explaining this might not necessary.
- 3) We will explain about this at the middle of this book. Under the design sketches.
- 4) We already did explain about this at the first few pages on this book
- 5) We don't have a database on our application. (it should have a one but assignment only ask for the user interfaces)
- 6) We only develop this to students at NSBM university. We are not going to interact with any other system.
- 7) We will be talking about this at the middle of this book. Under the usability methodology.

User Design Principles Used

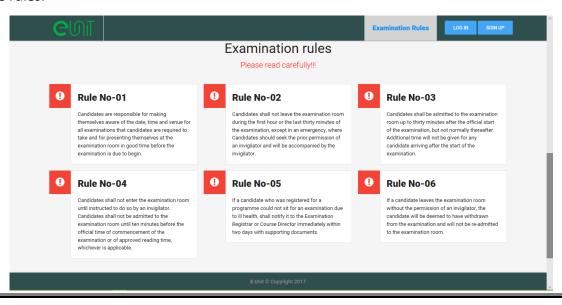
There are 6 User design principle according to our lecture slides.

- 1) Visibility
- 2) Feedback
- 3) Constraints
- 4) Mapping
- 5) Consistency
- 6) Affordances
- 1) Definition of Visibility: Achieved by placing the control in a highly visible location.
 - The navigation bar



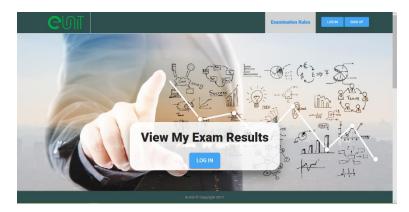
When you open this application in the first page on the upper right hand corner you can see 3 attributes. It's highly visible in the web page. login button and sing up button are in blue color. And 'Examination rule button' in gray box with the blue color letters. And our unit logo shows in top of the left hand side.

When you click the 'examination rules' button automatically go down the page then you can see those rules.



Login button

We show this login button in another place in middle of the page too.

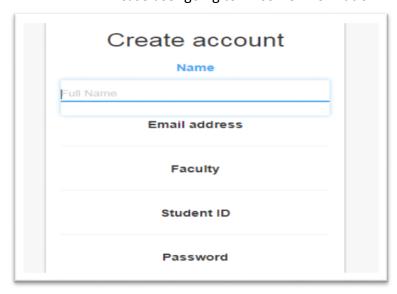


Inner navigation bar



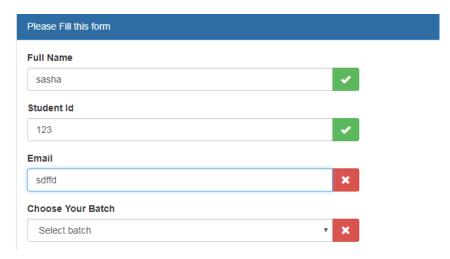
When the notification sign click it will display in Dark Green color. Then user can get a quickly understand about what the user just clicked or chose to click.

- 2) Definition of feedback: feedback is "Feedback is the provision of information to a user about the result of an action"
 - In case user going to fill some information.



User going to fill this form, click on the peculiar raw it shows what they really have to fill in there.

Contact form



When after user fill text boxes correctly, right side cross mark will turn to the green color right mark. Its mean user fill it correctly. And the email box, it's not change to the green color still user fill it in the correct format in the email addresses.

Change password



Normally uses have to create a password in correct format. If it's not, under the text box shows red crosses. And when user is typing their password (if it is correct) shows green right marks.

3) Constraints: Constraints are properties of an object that limit the ways in which it can be used .

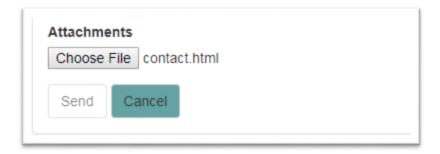
There are 3 types of Constraints

- 1) Physical
- 2) Logical
- 3) Cultural
- Physical Constraints

We don't use any physical constraints.

Logical constraints

E.g.: - 1



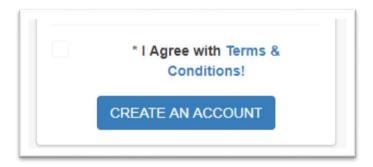
In here We added send button to left side and Cancel button to right side. In this case most people used to click the left side button when they are using the computer. So we used This kind of design to this.

E.g.: - 2



In here we used combo boxes instead of text fields. When we typing the batch number it might come up with problems. because different users can add these values in different manners. Then we used combo boxes. Every users should chose one value from the given combobox.

E.g.: - 3



We used 'terms and condition' same colors with the button. Then user would give much attention to it. We used 'create an account' button to under the condition with blue color. Then user will able to find it with easy. Because of the color difference.

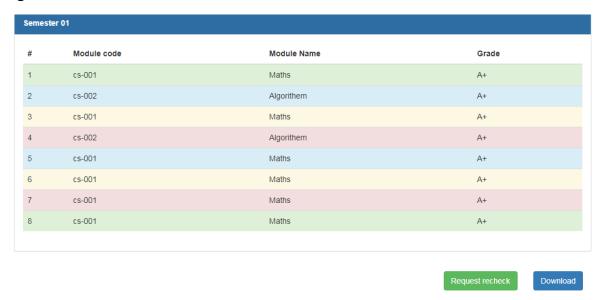
Cultural constraints

E.g.: - 1



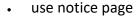
User click on the text box; the text box's border will be turn to light blue color.

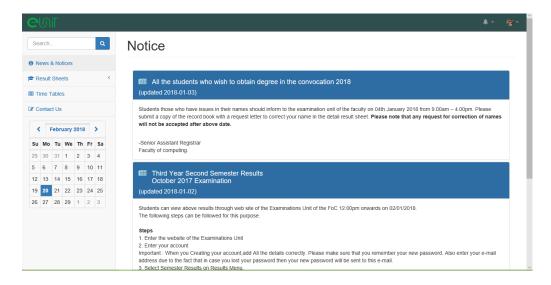
E.g.: - 2



We use to the time table three different colors. And 'download' button and 'request recheck' button are showing two different colors. Its help to identify time table clearly.

4) Mapping: Mapping is the relationship between controls and their action or effect in the world.

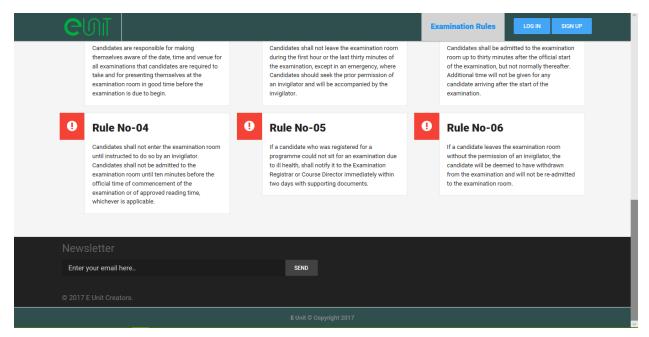




In this notice page you can see the navigation bar.it doesn't contain more tabs there are only 3 tabs. And between 2 tabs it only contain a same space. And left underneath the navigation bar

we can find the search bar. We could place this in the left side of the navigation bar. we didn't do that because it may confused the user. As you see we put some categories on the left side of the web page instead of putting it horizontally. if we put it horizontally it will be a distraction to user.

Use home page

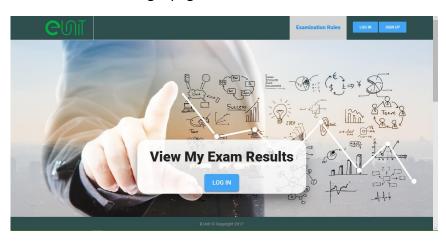


We used newsletter underneath the rules. because user also going to get mailed about their problems. then we thought this place is the suitable place for the newsletter box. We put important rules list in the middle of the page. then users will pay their attention easily to it.

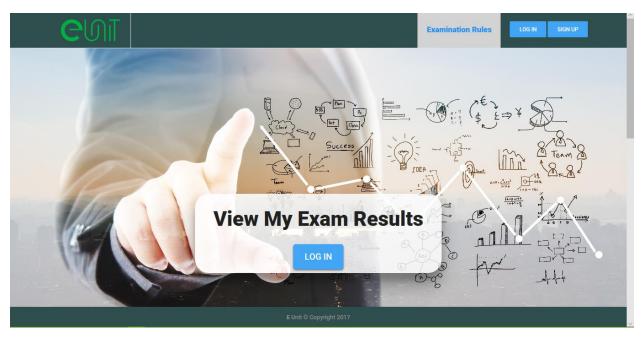
5) consistency

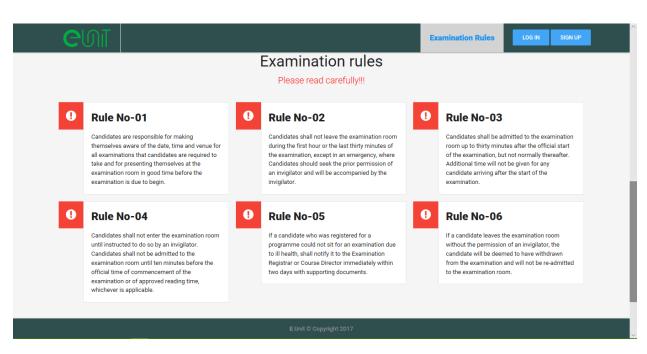
I'm going to explain this using page.

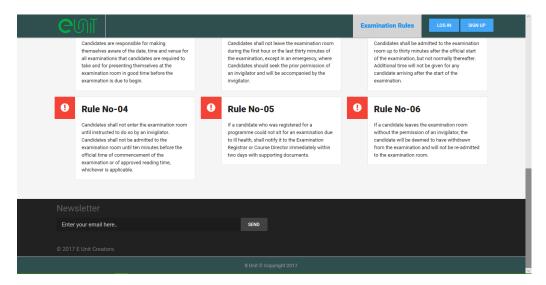
Login page



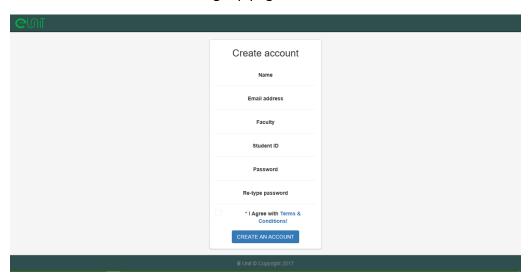
Home page



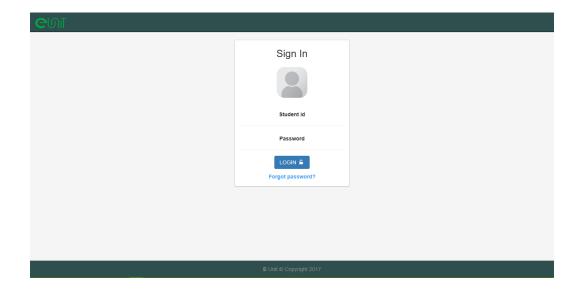




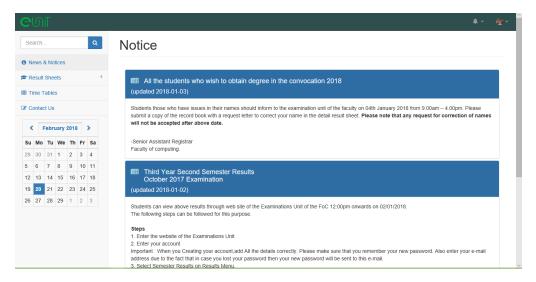
Signup page



Login page



Notice page



I show 3 different pages of our web site. And you can see

- o Same font size.
- Same button type and all buttons are same color.
- Same navigation bar for every pages.
- Same font size in every page.
- Same background color for every page.

Those are the things we did for create the Consistency.

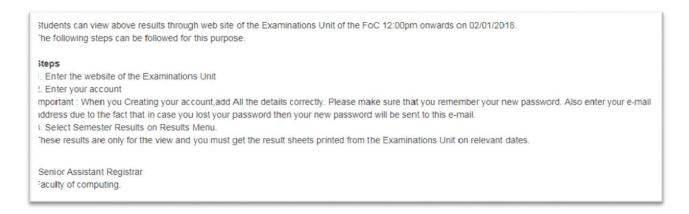
6) Affordance

We create this software it is not difficult to understand. If some on have the knowledge to use a common web site that knowledge should be enough to use this web application.

Usability mythology

Learnability: capability of a software product to enable the user to learn how to use it.

Our system is very to use. In our system user can easy to understand. A user with a knowledge how to handle a common web page can learn our system easily and automatically.

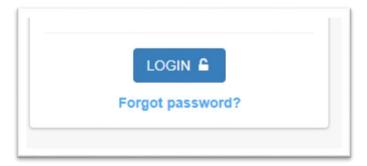


in our site we provide a steps about how to use this site. And we think it's very useful and easy to understand.

Efficiency:

Every type user can easily use this site.

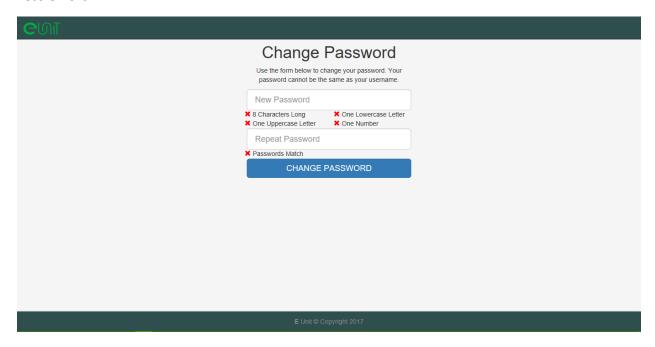
Here we display a message saying that the user has not remember the password. It helps to change the password and get new password.



Memorability

Our site is user friendly and familiar design; it is easy to memories. anyone can use this system easily. Then they should be able to memories what they had learnt.

Less errors



We use this validation for get correct password. And also we have a backup method. If some time system failure user can backup this site.

Satisfaction

At the end of the project we gave this system to chosen users to test and we got good feedbacks from them. According to them, they are satisfying about our interface. You can see their comments at the last of the report.

User profiles and Target user Description

Characteristics	Description
Age	15-20 20-25 25-30 30-35
Gender	Male Female
Profession	Students Visiting Students
Ethnicity	Sinhala Tamil Muslim
Physical Characteristics	Well built

	Hearing impaired Physically impaired
Income Group	Lower Lower-middle Upper Upper-middle
It-literary	Low Middle High
Locality	Ruler Semi-government

User profile



Shehara Kawindi is a 16 years old student of NSBM Green University. She is a sinhalese person and speaks sinhala. Her income group is lower and belongs to the locality group of ruler. Her It-literary is High.



Kaushal Rathwatte is a student of Nsbm and he is 21 years old. He speaks sinhala. His nationality is Sinhalese. Kaushal's income group is lower-middle and he has a locality of a semi-government. His It-literary is Middle.



Meena Kanagaratnam is a Student with low It-literay and belongs to the upper income group. She is 27 years old. Her ethnicity is Tamil and speaks Tamil. She is in the ruler locality. She is hearing impaired.



© Can Stock Photo

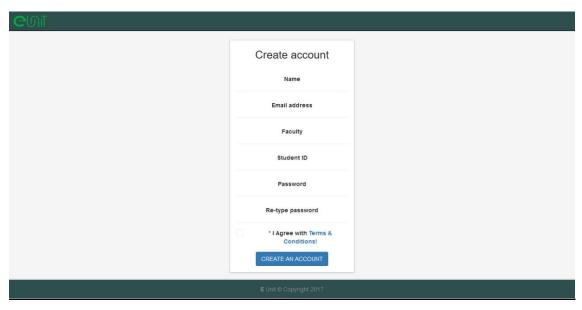
Shiwaya Mohommad is in 35 years of age. She is a Visiting Student of NSBM Green University. She is a Muslim person and speaks English. Her income group is Upper-Middle. Her locality is semi-government. She has Middle It-literary. She has a physical disability.

Parallel Design Sketches

In our case we figure out the complex part of our web application. It was Registration window.

We have 5 different windows for that.

Design: - 1 -



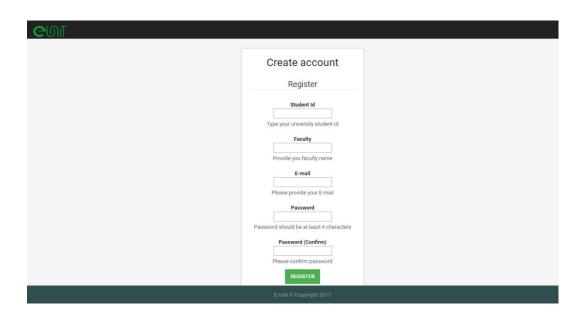
This is the selected design.

There is no any cons

Name: - Rajitha Disanayaka - BSC-PLY-COM-16.2-055

Pros and cons of this design according to our group members.

Design: - 2



Name: - Pramodya Senanayake BSC-UCD-CSC-16.2-020

Pros and cons of this design according to our group members.

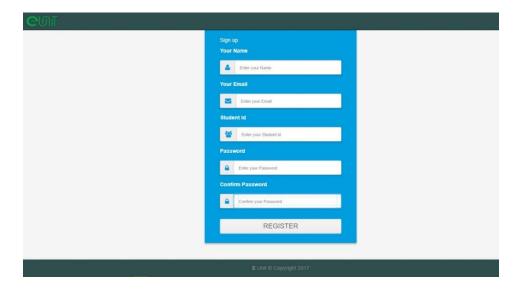
Pro: -

- Used same green color to registered button.
- Put all text box and labels middle of the page.

Con: -

• There's no any color differences.

Design: - 3



${\bf Name: - Indeevari\ Sriyasinghe\ BSC-PLY-COM-16.2-005}$

Pros and cons of this design according to our group members.

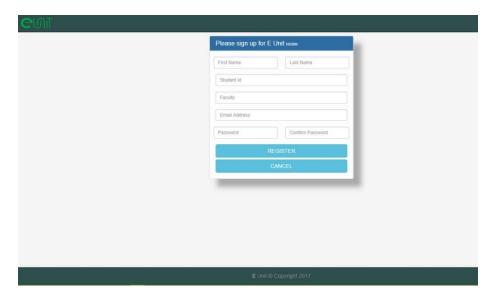
Pro: -

- use blue color background is good
- use small icons front of the text box

con: -

• Letters are small. It's hard to read.

Design: -4



Name: - Dhananja Lekamge - BSC-PLY-COM-16.2-157

Pros and cons of this design according to our group members.

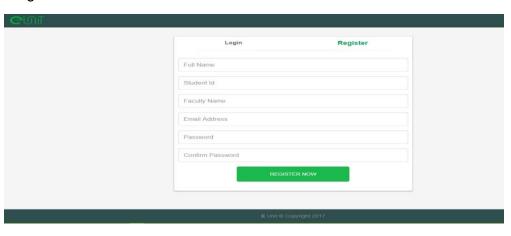
Pro: -

- use three different colors
- Use small and simple design.

Con: -

- Use white color background, it's hard to read.
- Use small letters.

Design: -5



Name: - Chethana Wickramasinghe BSC-PLY-COM-16.2-

Pros and cons of this design according to our group members.

Pro: -

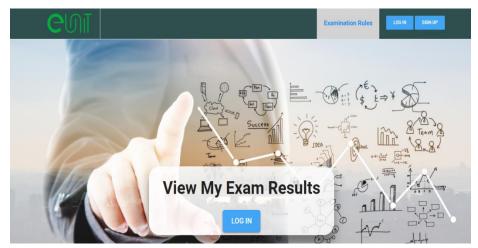
- Same color matching.
- Simple and user can easily identify.
- Long distance to type in text boxes.

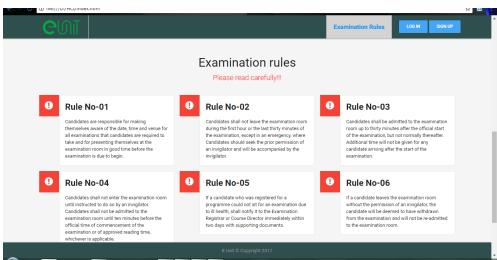
Con: -

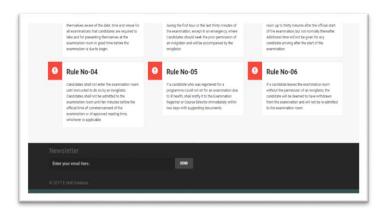
- It shard to read in white background.
- Login button and register buttons are in top of the white page. It's not correct way to the put buttons.
- User can't identify where the button.

Participatory Design Sketches and Prototype

1) Home page

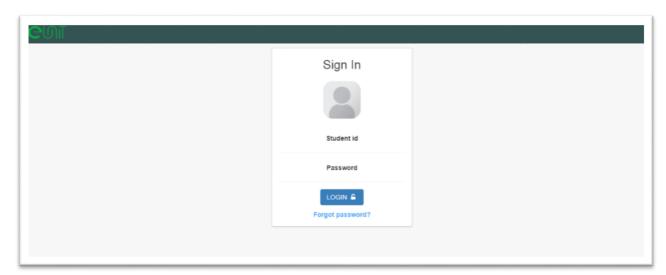






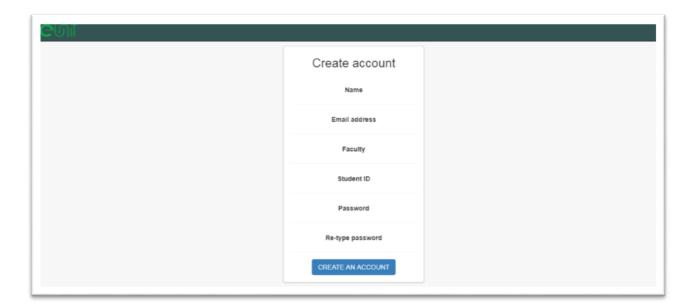
- This home page navigation bar only have 3 tabs then user don't have remember much thing
- left underneath the category list have the newsletter box.
- For the new users rules are showing on the middle of the home page.
- We used gray color for newsletters box.
- We used blue color as our buttons color because that color is matching with the background color and blue is a user friendly color.

2) Login page



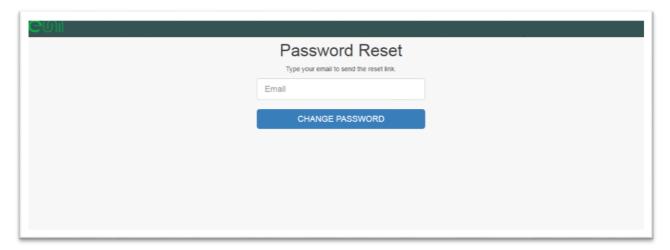
- We used the same background to here, same as the home page.
- We used a human profile photo to upside of the login window.
- "Enter the username" and "Enter password" instructions are showing in the blue color. Then user won't miss out the filling field.
- If user forget the password also that option is underneath the login button.
- If user want to go directly create a new account user can click on "don't have an account".

3) Registration page



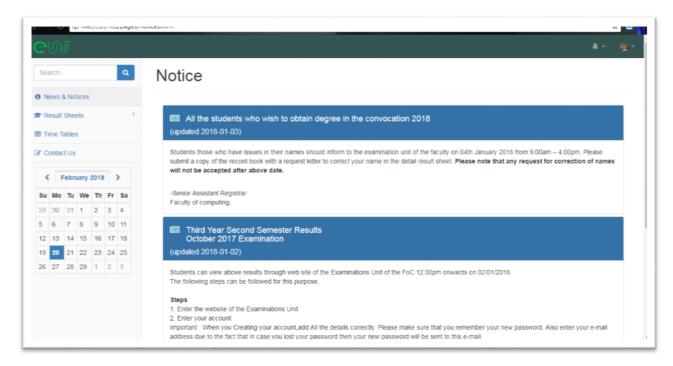
We already discussed about this design two times.

4) Change password



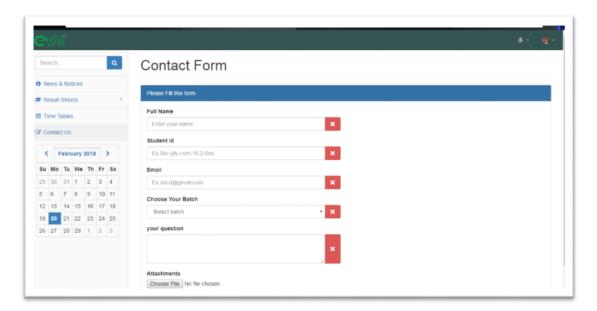
• We use blue color button as other pages.

5) Notice and news page



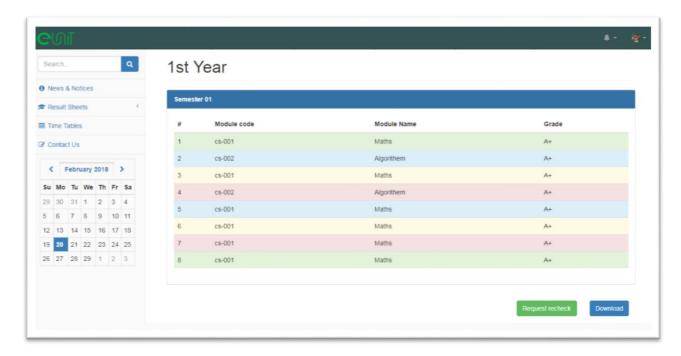
- We use blue color topic bars.
- In the left side we show side bar of the other pagers. User can go through the topic. All are link to their particular pages.
- We also provide the calendar in to the side bar.

6) Contact page



This is the contact page. If the user has any inquiries, they can make them using this page. Here user has to enter his details and if he has attachments he can attach them as well to make the inquiry.

7) Result sheet



In here students' examination results will be displayed. Students Have to select the year and the semester they want and they can check their results. If a student wants to recheck their results or want to download them they can use this page for it.

<u>Usability E</u>	aluations			
Our Forma	ive Evaluation Rep	<u>ort</u>		
Name: -				
Comments	-			
Good thing	s in our designs:			
Bad things	n our designs:			

Summative

Method: -Predictive Evaluation I

In this method we use Expert reviews approach.

Expert reviews:-

HCI experts (not real users) interact with the system, try to find potential problems, and , give prescriptive feedback.

Reviewers evaluate system based on high-level heuristics (usability principles):

- use simple and natural dialog
- provide clearly marked exits
- speak user's language
- provide shortcuts
- minimize memory load
- provide good error messages
- be consistent
- prevent errors
- provide feedback

Our Summative Evaluation Report

Expert Name: Dr.Chandana Perera(Lecturer)

Results: - Percentage

use simple and natural dialog -

provide clearly marked exits -

speak user's language -

provide shortcuts -

minimize memory load -

provide good error messages -

be consistent -

prevent errors -

provide feedback -

Improvements Done According to the Evaluation Report						

Conclusion and Future plans

We hope to improve our system with better functionalities in future. We try to make the system more user-friendly according to the students' requirements.

References

Boostrap Freamwork

www.Fontauson.com

Www.youtube.com

Group Members

Pramodya senanayake – BSC-UCD-CSc-020

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