CS5340 Assignment #4

Storyboards

This is Bob, he is 35 years old

One day Bob hears about a great new email service called EasyEmail

Bob decides to sign up for EasyEmail and see if it is as good as people say

This makes his co-workers nervous because Bob sometimes gets very annoyed at his computer (most people say he becomes psychotic), especially when he is prompted to enter all of his personal information and has to create new login credentials

After selecting to create an account, Bob is prompted with...

He is delighted with the ease of signing up to EasyEmail

Meet Jessie, she is 40 years old, and works as a doctor

Jessie is paranoid about being arrested for accidentally leaking her patients sensitive confidential information

Jessie decides to use EasyEmail at her practice

She is able to set her preferences to have any email with patient information go to a specific folder

In this folder her emails with sensitive information will stay secure until she decides to delete them

EasyEmail's ease of use and handy features makes Jessie feel much better now that she is not worried about being arrested

CS5340 Assignment #4

Meet Harry, he is 46 years old and retired

Harry is a hoarder (although he prefers the term "collector"). He likes to collect things so much that he even refuses to delete any email that he receives

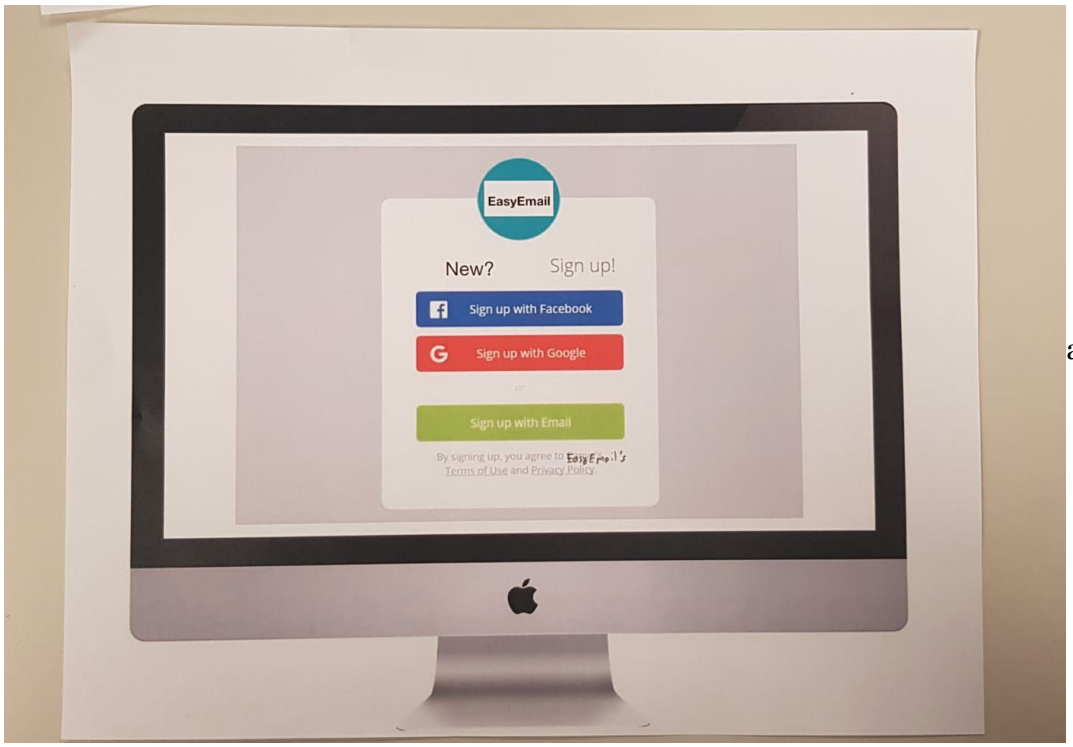
Harry had bought tickets to the hoarding convention coming to town but he couldn't find them amongst the hundreds of thousands of emails in his inbox

Harry decided to enable the Auto-Remove feature on his inbox, setting it to 30 days and selecting to move emails to a folder called "Emails: DO NOT DELETE"

He then uses the search feature to search for 'tickets' and only 3 results are found in his inbox

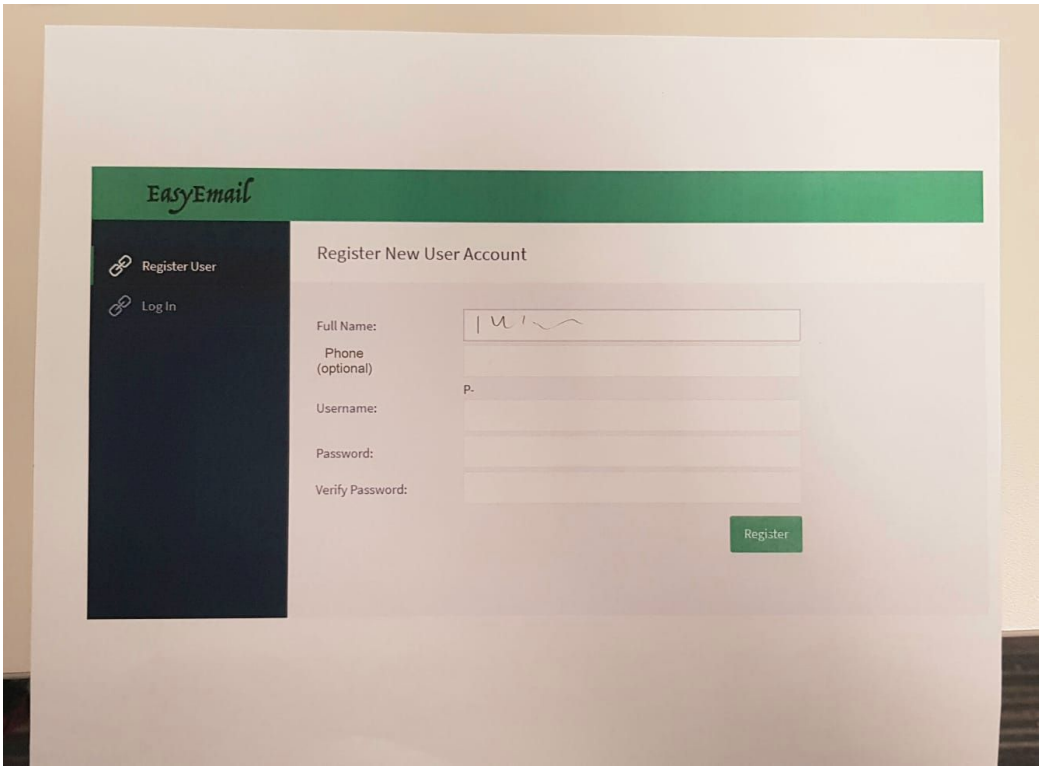
Harry was delighted to find his tickets so easily and went off to the convention to added more useless stuff to his "collection"

Paper Prototypes

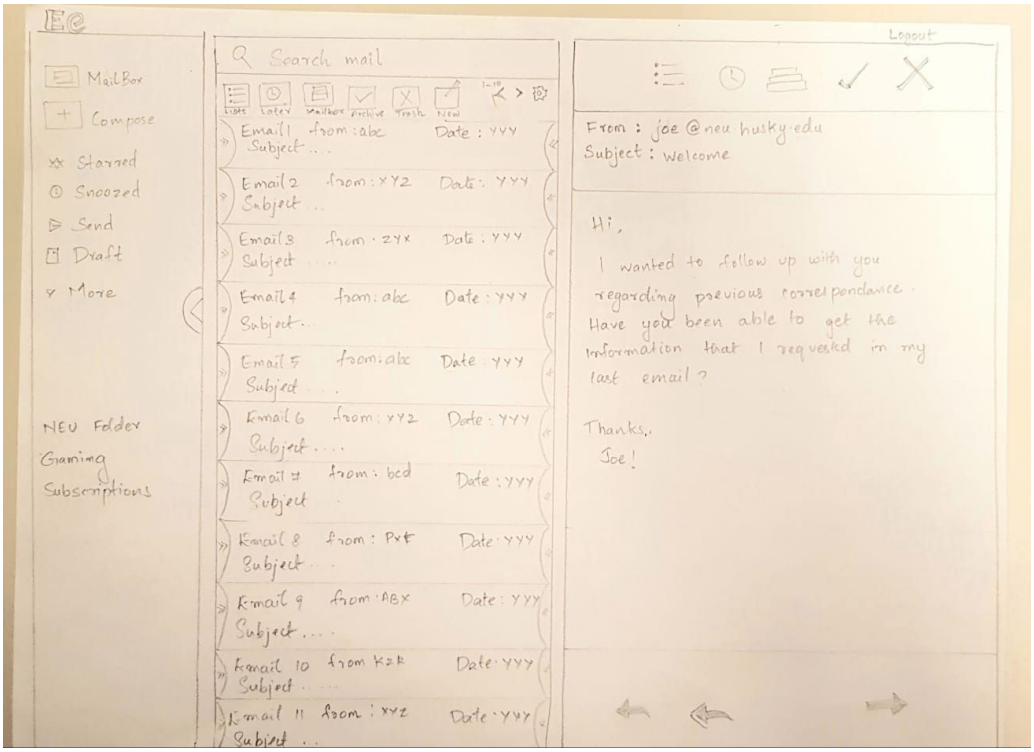


Login Screen for new and returning users

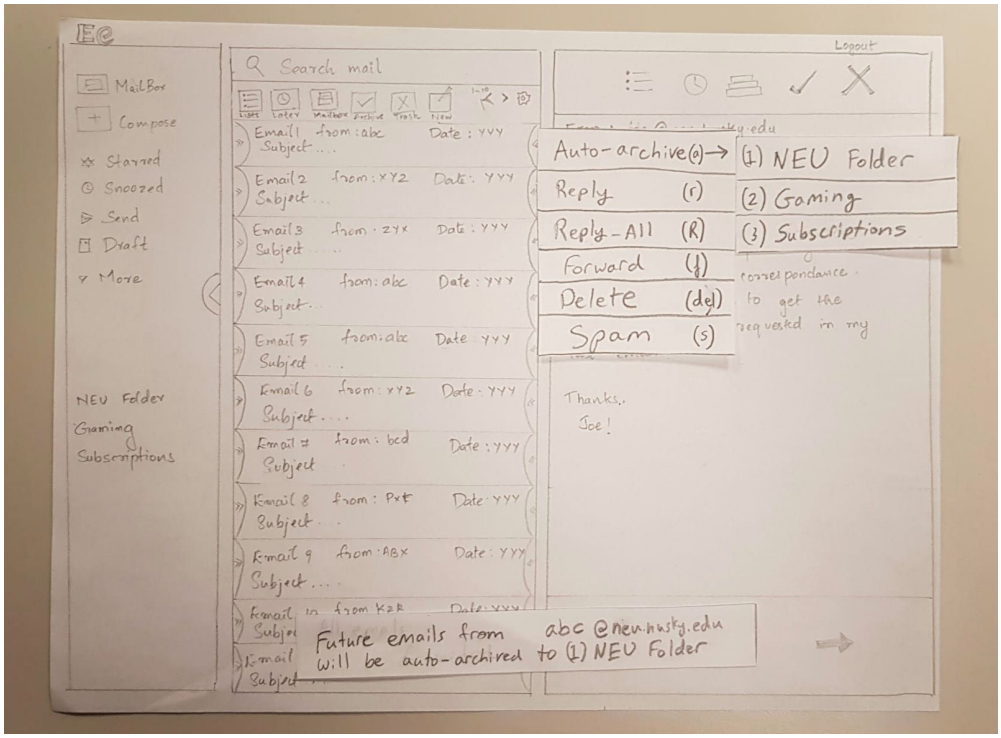
CS5340 Assignment #4



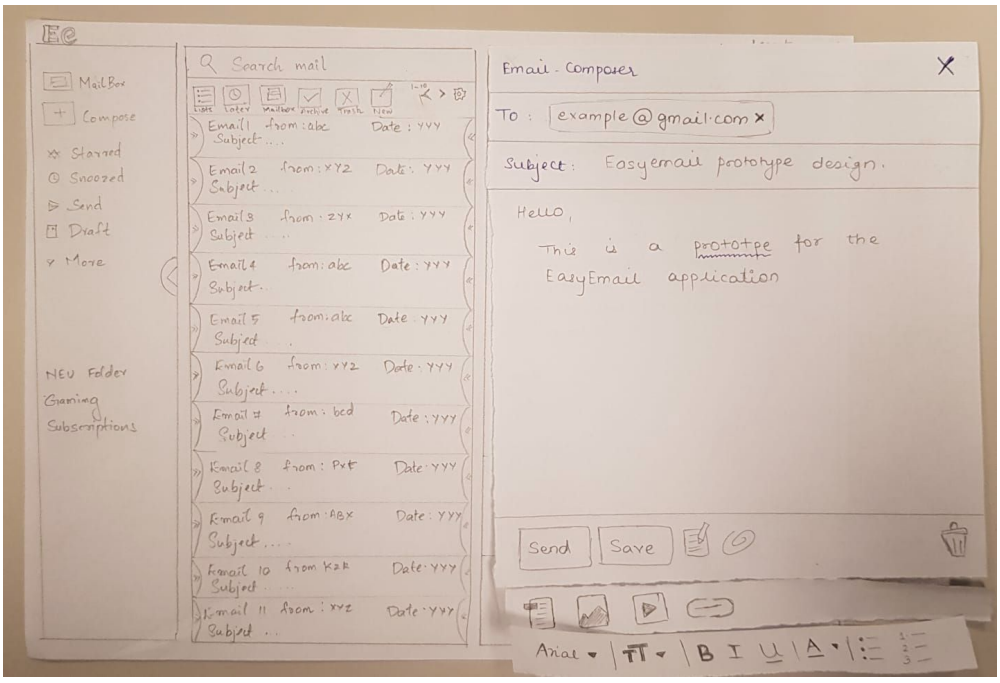
User registration page for a new EasyEmail account.



Inbox open after logging in. An email is open and being viewed.



Auto-archive feature shortcut being used from the inbox to create a new auto-archive rule for an email address. A notification that fades away letting the user know the action is successful is given at the bottom.



An email being composed. The two bars at the bottom appear when the user hovers over the “formatting” button next to the “save” button so the user can format the email text.

Video of Prototype

https://www.dropbox.com/sh/6k5v035yic3axo3/AAB4kkESYt9Qxji2JIxeVQcQa?dl=0

CS5340 Assignment #4

Usability Testing plan

Metrics for Success

The metrics for success is considered as

a) Performance - Accuracy and Speed of the system

This usability testing ensures that the application is fast without compromising the quality/accuracy. The below actions are the major/frequently performed user actions considered to measure this usability goal. There are several factors which can be considered for analyzing the metric, some of the most common actions include:

- ❏ Sending Speed of the email - 1s
- ❏ Receiving Speed of the email - 1s
- ❏ Searching an old email - 2s

The KLM calculations can be used as a metric for the expected time for common operations. The time taken for each action can be measured for a certain number of users. And if in all cases, we are getting a time within the expected range, then we can safely assume that the product is a success in this metric.

b) User engagement

This defines how satisfied the customer was by using this email application. Motivation is to increase product valuation by expanding active users and adoption. The features and usages of the product can be measured in a way to rate the overall success of the product. The areas that can be used for this analysis are:

Case 1 :

User action: How often the product is being used
System action: Gather metrics of how often the user logs into the mail application to check the emails and send emails.

Case 2 :

User action: Create a new email account
System action: Gather metrics of the number of users who sign up

Case 3 :

User action: Login to the email application and use the features
System action: Gather metrics of the user engagement and the login and logout time to generate statistics on the time spent by the user.

Case 4 :

User action: Login to the email application and use the features
System action: Gather metrics of which features are being used most and ensure that features are error tolerable.

The success of the application in the user engagement metric can be calculated if the rate of the users is increasing by 50% over the span of the first 6 months after the product is being launched. Also here, over this time if 90% of the users who created an account are logging in weekly, then we can consider the retention rate also as a success.

c) Ease of using the application
Mainly focusing on the level of skill required to learn/use the EasyEmail. It should be a balance for both novice and expert users.
The demographics of the users who are mostly using the application need to be collected. And it should be made sure that people in all age groups are using.

What data do you plan to collect when you test?

For building the metric, we plan to collect any and all forms of user input and interaction with EasyEmail that we can. The inputs we plan to collect and organize data to be analyzed are:

- Mouse input:
  - Frequency of use of buttons
  - Any time emails are dragged and dropped between folders
  - Time spent hovering over any objects for additional information
  - The time it takes to use the mouse to accomplish certain tasks, like setting up auto-archiving, getting to the compose email state or to organize emails within a folder.
  - How often the mouse is used to perform an action, where a keyboard shortcut or a simpler method is available to accomplish the same goal (which may not be clear to the user).
- Keyboard input:
  - Keyboard shortcut use will be tracked so we can figure out ways to make it easier for the user to learn them
    - These include the ‘delete’ key to delete emails/folders, ‘r’ to reply (‘R’ to reply-all), ‘f’ to forward, ‘a’ to enter the auto-archive menu (which will have numbered options so the user can quickly set up an auto-archive/delete pipeline), etc...
  - Search history will be tracked to train our search algorithm to best satisfy the user’s search needs
  - How often auto-fill is used (and used correctly) to speed-up user input of email-addresses and assist in typing of emails.
- Time-related data: Because efficiency and ease-of-use is so important to our product, time-related data will be useful in making our product better for users
  - Time to reach the ‘compose email’ state
  - Time to use auto-archive feature/ set up an auto-archive instruction
    - How often it is used
  - Time spent organizing inbox and other email folders
    - This will help us improve our auto-archive/delete feature

What strategy or strategies do you think you will use to collect data? (A specific survey, interview, etc.)

Plan to conduct an online as well as an offline survey to measure product usability.

For the online survey, can be sent to a user who is using the system for more than a fixed time (Eg, New user will receive an email within a week so that we can use the result of the survey to access the initial user adoption and how easy is it for the user to use the system

Where will you perform your experiment?

Offline data collection can be done within the Campus. An event can be organized along with that we can encourage campus staff and other students to use the new software and share their experiences, this data can be collected as a survey or they can talk about the experience.

Online evaluations can be sent to each user account, and data will be collected regarding usage while the program is being used on user computers (with their permission, of course).

Will you need any additional equipment (eye-tracking software, microphones, software, etc.)?

- Yes, eye-tracking software can be employed to see where the user is most engaged.
- Software to track the mouse click can be used
- measure how much time the user spends on one feature

Discussion and Analysis

A brief paragraph description of your product:

EasyEmail is a user-friendly, intuitive, easy to manage and hassle-free email service designed for people who are tired of spending hours to clean and arrange their inbox or sift through tons of old emails to find what they are looking for. Users can make use of a wide variety of features like a powerful search and filter tool, spell-checking, auto-suggesting frequently used phrases and a lot more to pace up their work. With the freedom to tune these features as users like it with an option to turn off the use of the features completely, EasyEmail offers a lot of flexibility and simplicity working with emails. One of the handiest tools offered by EasyEmail is the ‘auto-delete’ feature using which enables the user to set up a time frame in which an email will be deleted after it is received which prevents old emails from piling up in the inbox.

- Any design metaphors used (or planned on using if not shown).
  Some of the design metaphors that we plan to use in the system:
  1. *Trash cans icon* - In order to delete an email, a user clicks on the bin icon. It is similar to throwing a mail into the bin
  2. *Image icon* - The image icon to insert an image.
  3. *Text editor icon* - The text editor icon opens up a list of options to edit the text while composing an email
  4. *Plus icon* - This icon is used to compose a new email
  5. *Magnifying glass icon* - This icon indicates a search email action.

- *A user analysis (who are your users, what context, situations, and environments do they use it in).*

  Our users will be anyone who has a current email address and is looking to move to a service that has more privacy or doesn't want to let their inbox become piled up with old emails, spam and/or thousands of unread emails. Specifically, our users would be:

  - **Faculty and students** - announcements, contacting TAs.

    Context - A course is taught by a professor during the semester A professor generates course content, delivers the lecture and sends out assignments. Students are enrolled in that course. There are teaching assistants who conduct office hours and grade assignments.

    Situation / Environments -

    1. A faculty want to share the assignment questions:
       A faculty/instructor can use EasyEmail to send out assignments as a pdf or word as an attachment in an email to the group of students that are enrolled in his course.
    2. A faculty want to make announcements about an upcoming test or quiz:
       An email stating the date and time of the test/quiz can be sent out to students via EasyEmail by the professor. With the event detection feature of EasyEmail, an exam event is created in the student's calendar.
    3. A student wants to ask a query on some topic to the faculty:
       A user can send out a list of questions about the topic he is studying via EasyEmail to the professor.
    4. A teaching assistant wants to share the grade sheet:
       TAs can send out graded assignments back to the students via EasyEmail. The TAs can also include the mean, median scores of the assignment in the email.

    Environment -

  - **Business employees and customers** - meeting invites, sharing files, reporting bugs, customer support

    Context - A company has a large number of teams working on different products. There are customers who use the products offered by the company.

    Situations / Environments -

    1. A team member wants to send out meeting invites to other members:
       When a meeting is created by a team-member and other members are added to the attendee's list, EasyEmail automatically sends out an invitation email to the members invited. The members who receive the email have an option to accept or decline the meeting. The response of the members is sent to the organizer as an automated email.

2. Employees want to send out important files and links:
   Employees can send important documents like meeting notes, project specifications securely via EasyEmail

3. A team member wants to send out a project proposal to his manage:
   A team-member composes a project proposal using the features offered by EasyEmail within the email-composer.

4. A customer wants to report a bug/issue within the product:
   Customers who use products may sometimes find certain issues or bugs while using the product. They can report it to the company via a customer support email. With features of image attachments offered by EasyEmail, users attach screenshots to convey a specific issue that they face.

- **Marketing companies** -

  Context - A company wants to promote their business, grow their customers, cultivate the relationship with existing customers, offer coupons.

  Situations / Environments

  1. A company wants to maintain relations with existing customers:
     A company that has customers that are frequently purchasing a particular type of product or service can offer discounts via promotional emails formed via EasyEmail.
  2. A company has just released an interesting and useful product:
     Marketing emails regarding a newly launched product can be sent out to the users with a pdf containing brief product descriptions
  3. A store is organizing a clearance sale:
     A store can notify regarding an upcoming clearance sale to all its subscribers

- What 1-3 things do you think your product does well.
  - *Email composing*:
    Our product provides a very clean and intuitive view of the email composer. It has multiple fields to take in user input. The 'to' section allows users to enter as many recipients that he wishes to send an email to. The email body is a large text area where the user can modify the text, attach files, enable spell-check while composing. The icons of text toolbar and adding attachments is designed such that it is intuitive.
  - *Meaningful feedback messages:*
    Our product provides necessary feedback messages on successful completion of an action such as when an email is sent, email is deleted, auto-archive feature is turned on. These feedback messages are useful and give the user a sense of satisfaction that the task he performed is completed
  - *Auto archive feature:*
    Our product's auto-archive feature is a must need for users who have to dig through a large amount of emails that pile up each day in their inbox. They can now enable the

auto-archive feature by clicking just on the right side of the email and selecting the necessary options.

- What 1-3 things do you think you can improve upon after testing your prototype.
    - *Providing an Undo functionality for email sent:*
      While testing the prototype, we thought that many a times a user may accidentally click the send button and then realize that he sent it to the wrong user. We could make the system more forgiving by adding an undo button which appears for a short span of time after user clicks on Send.
    - *Use of meaningful colors:*
      We can make use of relevant colors in our system to convey certain things to the user. The right colors can show users whether they are doing the right thing or the wrong thing. We can make use of meaningful color schemes to make the product more user friendly and complete.
    - *Give more screen real-estate to the email-composer:*
      The email-composer is currently squeezed to the left of the inbox and uses only the left-half of the screen. The user might want more screen than that to format the email and do things like add images to the email being sent. We need to do further testing to see if more screen space is wanted by users when composing emails.

Amendments to Previous Assignments

- New use case added to assignment 2, used on the storyboard for this assignment.
  Case:
    - Harry, 46 years old, is retired. Harry has a hard time getting rid of anything, even his emails. He never deletes an email. Harry set the Auto-Remove feature to 3 weeks and had his old emails placed in a separate folder in case he wanted to look at them. This way he can now use the search feature to search his recent emails and not get tons of results that he would have to sift through.

Team Details

Zach Rooney	rooney.z
Rajesh Sakhamuru	rajes95
Neenu Jacob	neenu
Deesha Shah	deesha