

USAGE TRACKING FOR SINGLE PAGE WEB APP

By:- Akash Bhakat

Delivarables:-

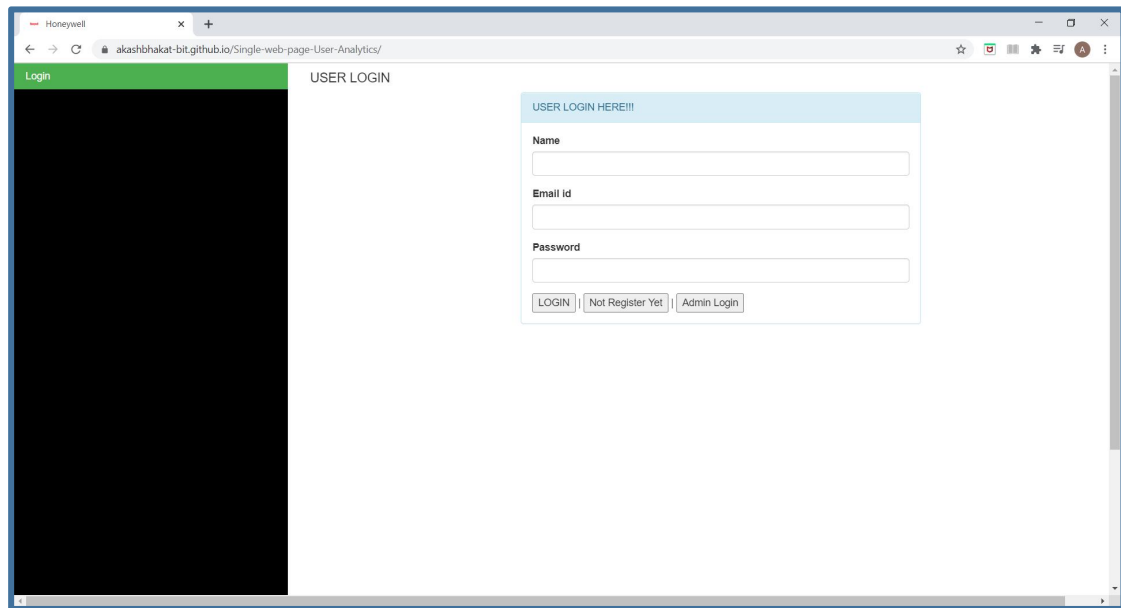
1. A mock single page application with multiple in-app pages and interactive UI elements on each page. The mock application should have a login and logout process.

Link for the website:-

<https://akashbhakat-bit.github.io/Single-web-page-User-Analytics/>

Screenshot of the Website and the format of data presentation

Home Page

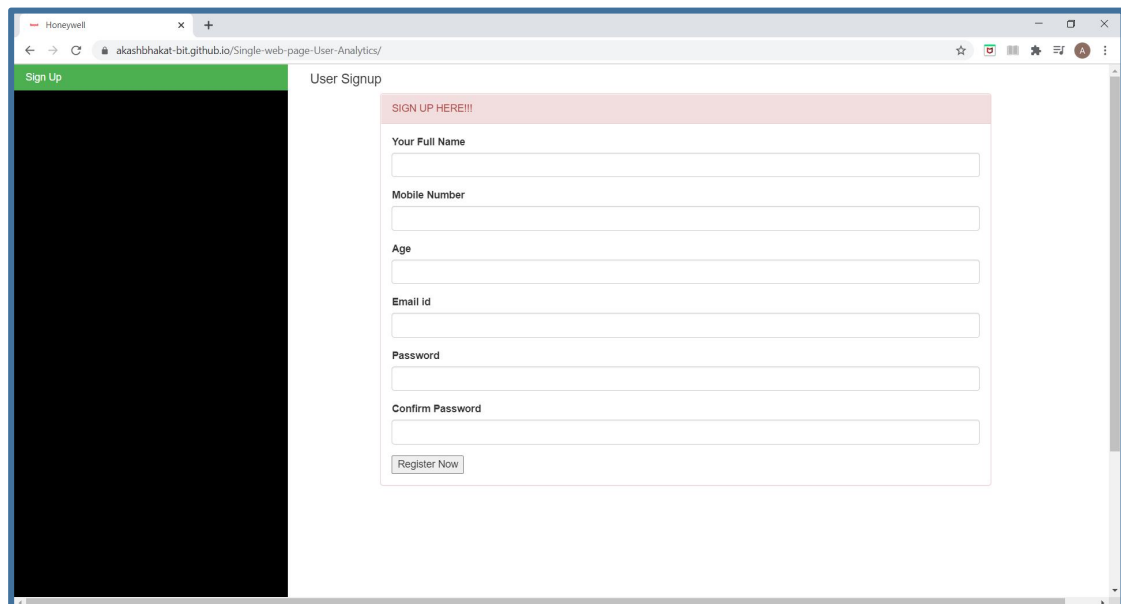


The screenshot shows a web browser window with the URL `akashbhakat-bit.github.io/Single-web-page-User-Analytics/`. The page has a green header bar with the text "Login" on the left. The main content area is titled "USER LOGIN" and contains a light blue box with the heading "USER LOGIN HERE!!!". Inside this box, there are three input fields labeled "Name", "Email id", and "Password". Below these fields are three buttons: "LOGIN", "Not Register Yet", and "Admin Login". A large black rectangular area is visible on the left side of the page, partially obscuring the header.

For existing user, they should login from here.

For new users, they need to Click on "Not Register Yet". Then they will be directed to a Sign Up

Page

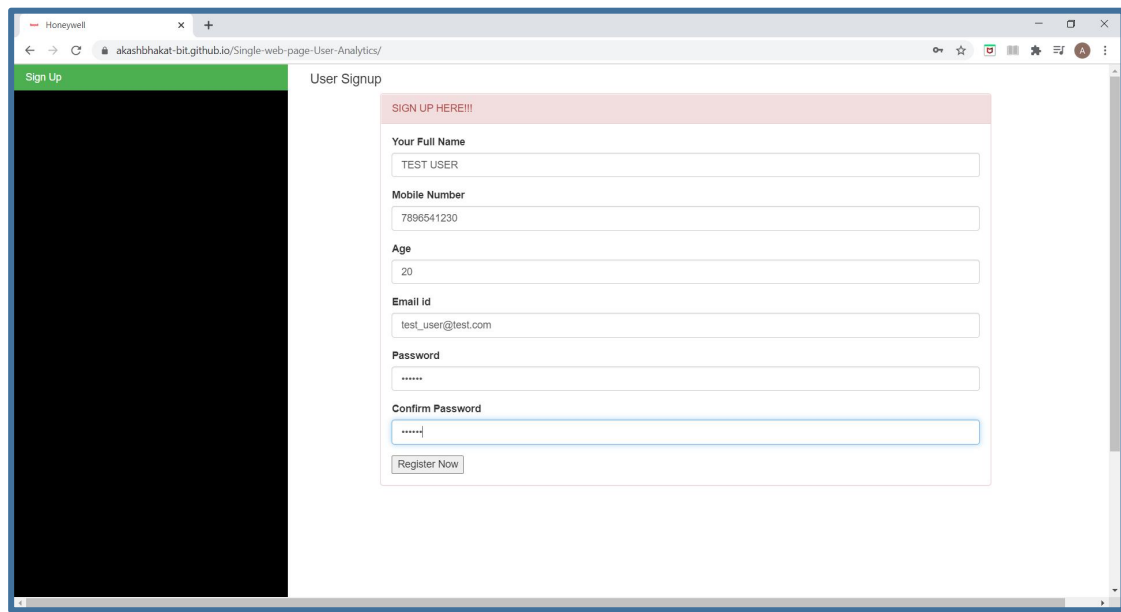


The screenshot shows a web browser window with the same URL as the previous page. The page has a green header bar with the text "Sign Up" on the left. The main content area is titled "User Signup" and contains a light pink box with the heading "SIGN UP HERE!!!". Inside this box, there are five input fields labeled "Your Full Name", "Mobile Number", "Age", "Email id", and "Password". Below the "Password" field is a "Confirm Password" field. At the bottom of the box is a button labeled "Register Now". A large black rectangular area is visible on the left side of the page, partially obscuring the header.

So let me consider 2 cases for demonstration here.

1. A new user signs up.
2. An existing user logins

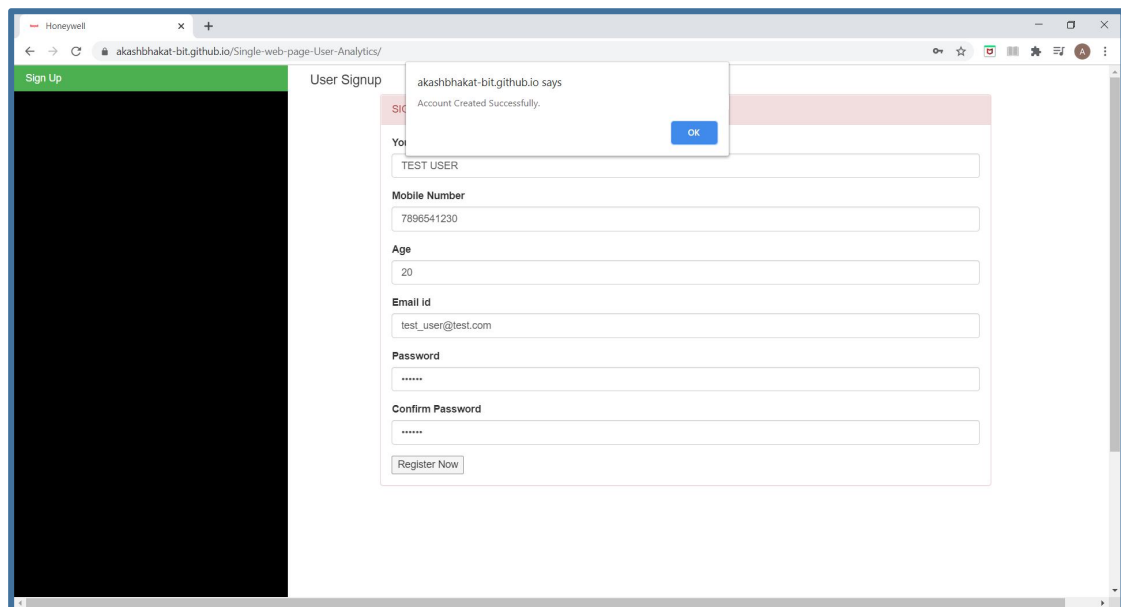
Case 1. New User Signs up



The screenshot shows a web browser window with the address bar displaying 'akashbhakat-bit.github.io/Single-web-page-User-Analytics/'. The page has a green header with 'Sign Up' and a white main area with 'User Signup'. A pink banner at the top of the form says 'SIGN UP HERE!!!'. The form fields are: 'Your Full Name' (TEST USER), 'Mobile Number' (7896541230), 'Age' (20), 'Email id' (test_user@test.com), 'Password' (*****), and 'Confirm Password' (*****). A 'Register Now' button is at the bottom.

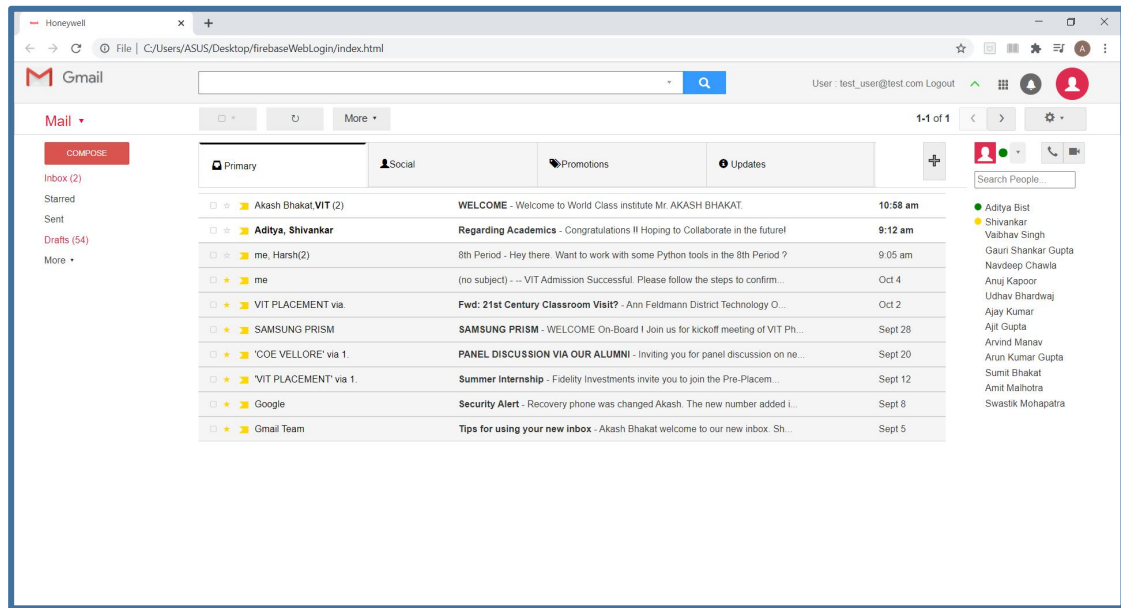
After filling it, the user needs to submit it. For this they need to click on Register Now button.

On clicking they will see a Pop up, saying “Account Created Successfully”.



The screenshot shows the same web browser window, but now a pop-up message is displayed over the form. The pop-up says 'akashbhakat-bit.github.io says Account Created Successfully.' and has an 'OK' button. The form fields are still visible in the background.

After clicking on OK button, they will be directed to the website.



This is the Home Page of the website. This will be first seen after Login or after Sign up.

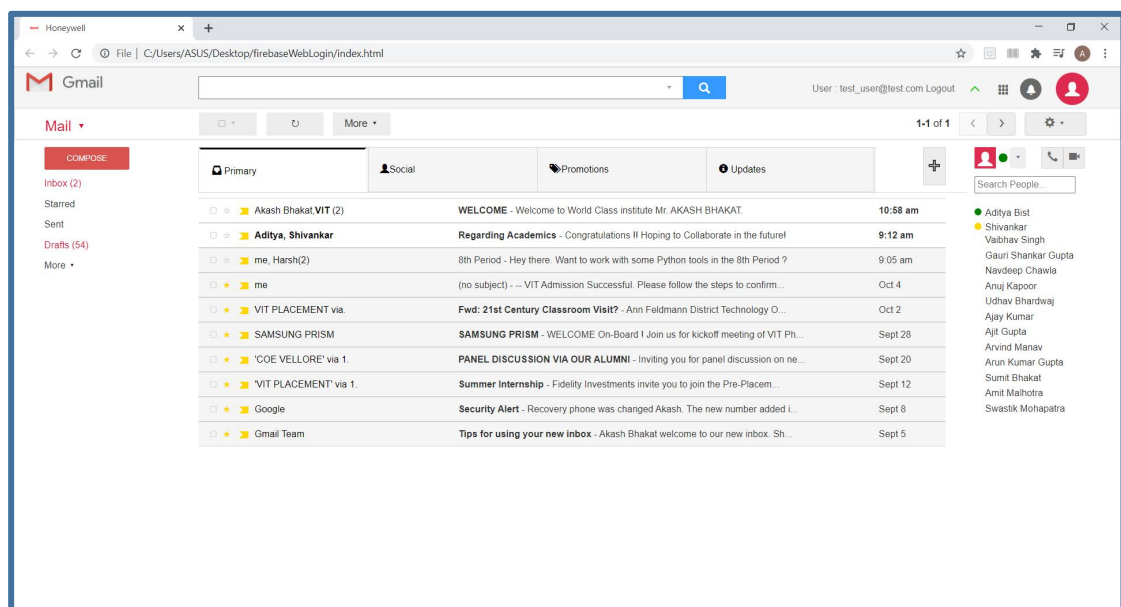
In this page, There are 4 screens that are functioning namely,- INBOX, STARRED, SENT, DRAFTS.

These screens can be switched by clicking on the respective buttons.

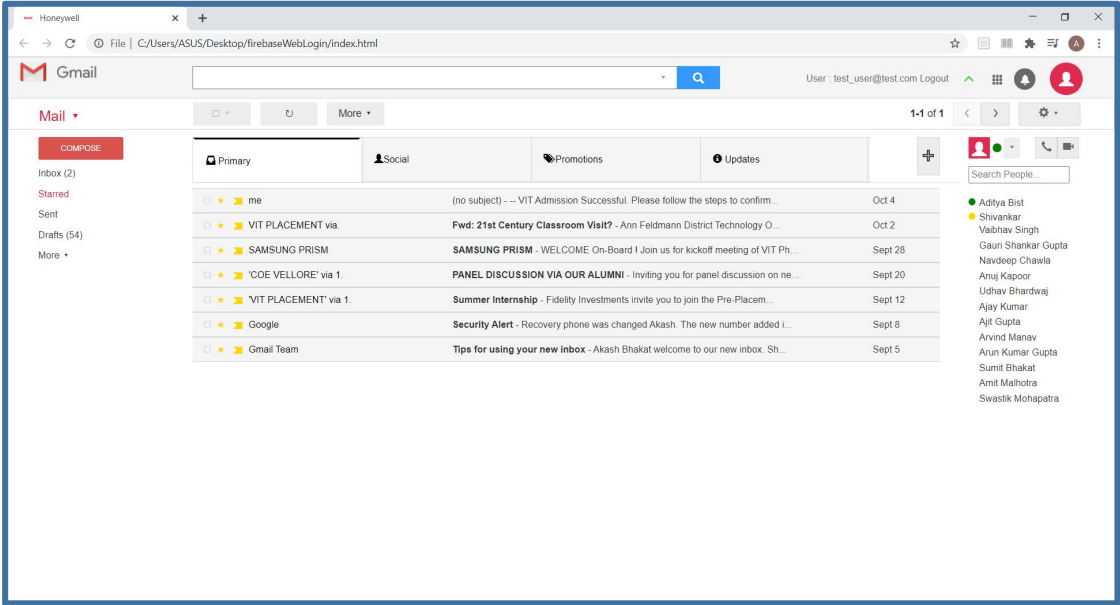
Also there is a Logout Button that the user needs to click on to logout.

Now Showing the 4 screens.

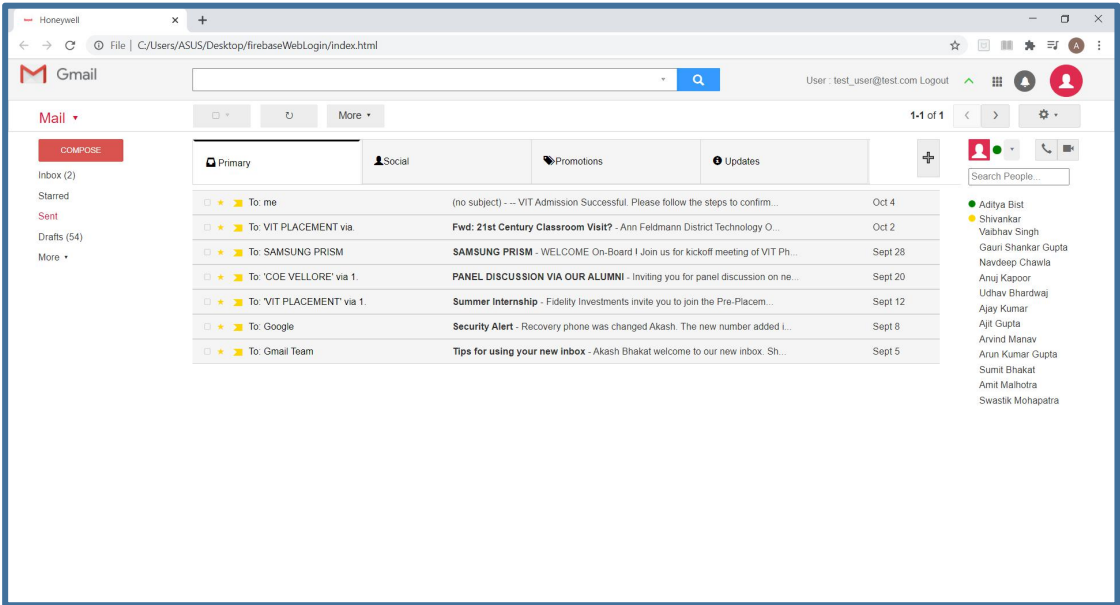
Inbox



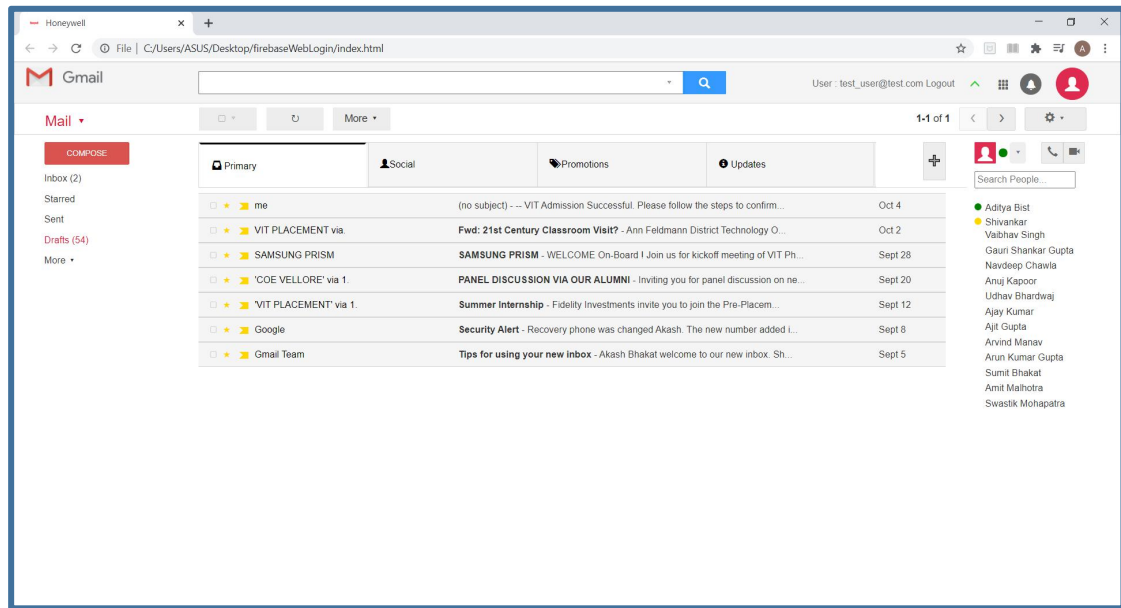
Starred



Sent



Drafts



Now the website tracks all the clicks of the users on the website. It tracks the time spent over each Key elements, the click sequence from Login to Logout, and the navigation map to recreate the usage.

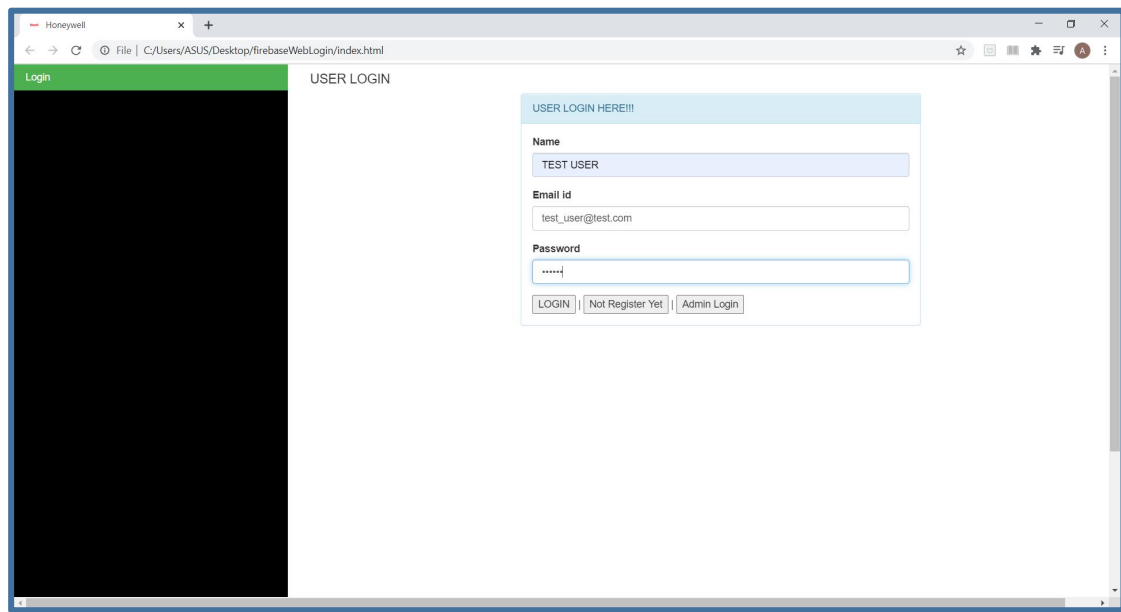
Now the user can logout

Now Considering Case 2

Case 2

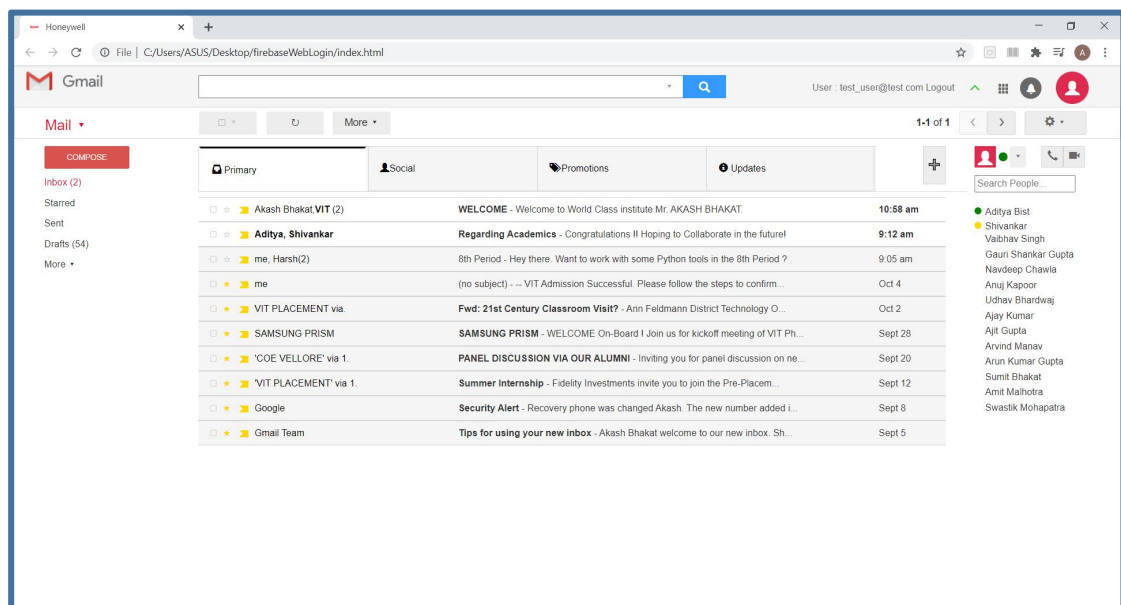
An existing user logs in

Lets consider the same user.



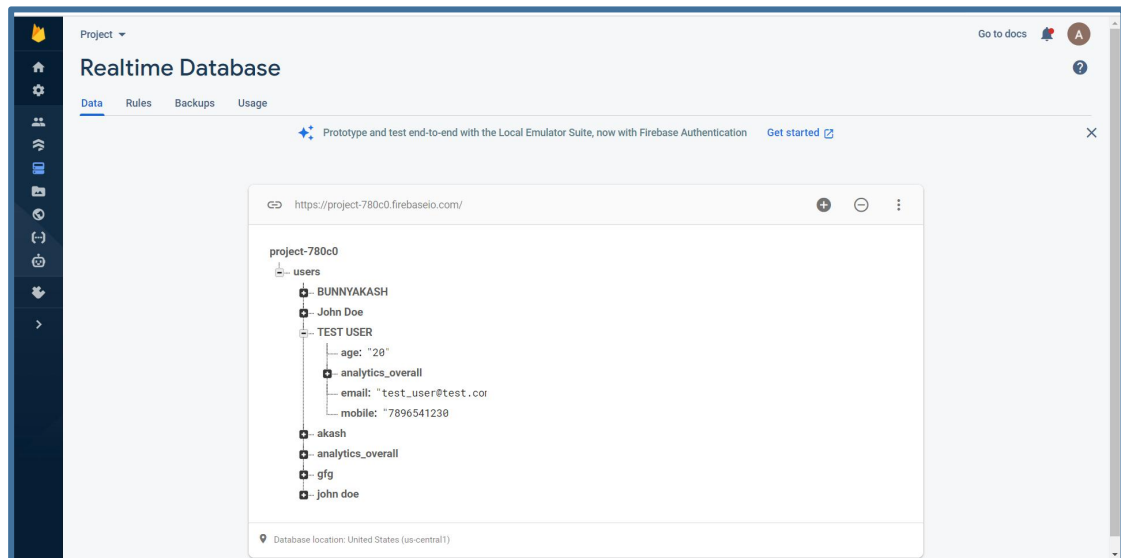
The screenshot shows a web browser window with the address bar displaying 'C:/Users/ASUS/Desktop/firebaseWebLogin/index.html'. The page has a green header with 'Login' and a main content area titled 'USER LOGIN'. On the left, there is a large black rectangular area. On the right, there is a login form titled 'USER LOGIN HERE!!!'. The form contains three input fields: 'Name' with the value 'TEST USER', 'Email id' with the value 'test_user@test.com', and 'Password' with masked characters '*****'. Below the password field are three buttons: 'LOGIN', 'Not Register Yet', and 'Admin Login'.

After Login its the same thing as it was for new user.



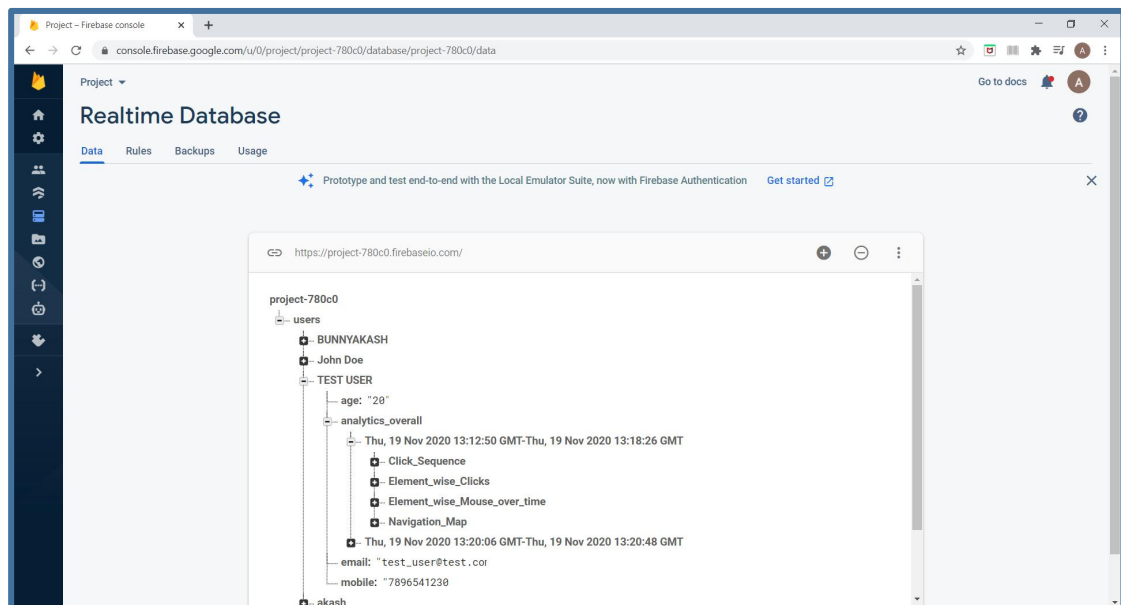
Now a view at the database

For the purpose of database I have Used Firebase



Here we can see the newly created user TEST_USER

Under Analytics Overall we can see the main 4 things that are tracked



From the image we can see there are 2 instance of timestamps. These 2 are the usages that are created:- First while demonstrating New User case and the other while demonstrating Existing User case.

Also we can see 4 main things are required to be tracked.

Now lets see the Admin side to get the data.

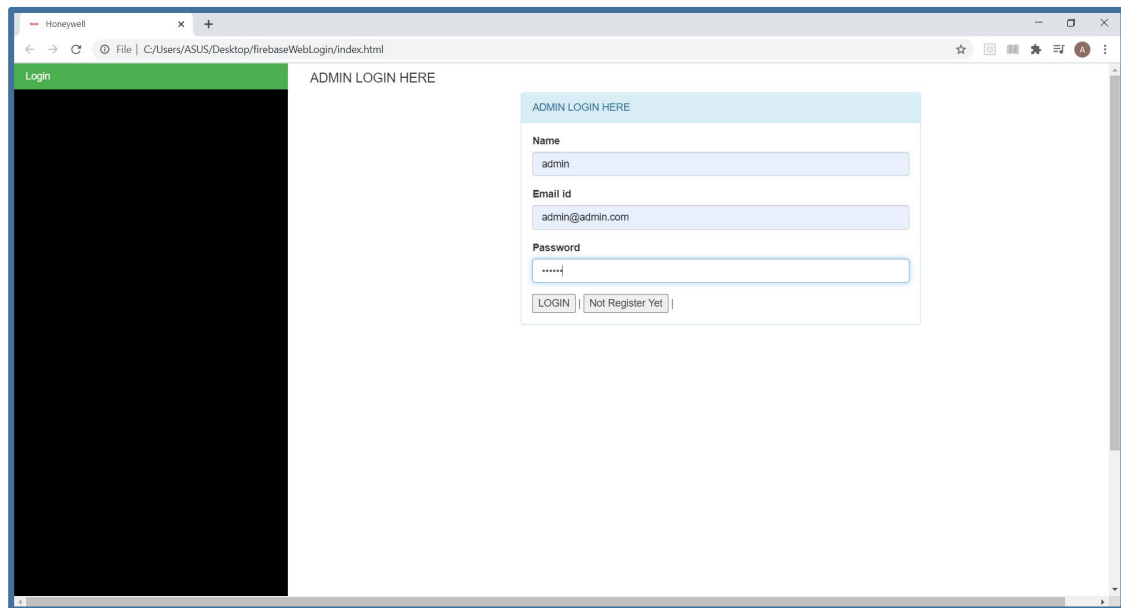
Admin login portal.

Already I have created an admin account. The credentials are as follows:-

Name:- admin

Email:- admin@admin.com

Password:- 123456

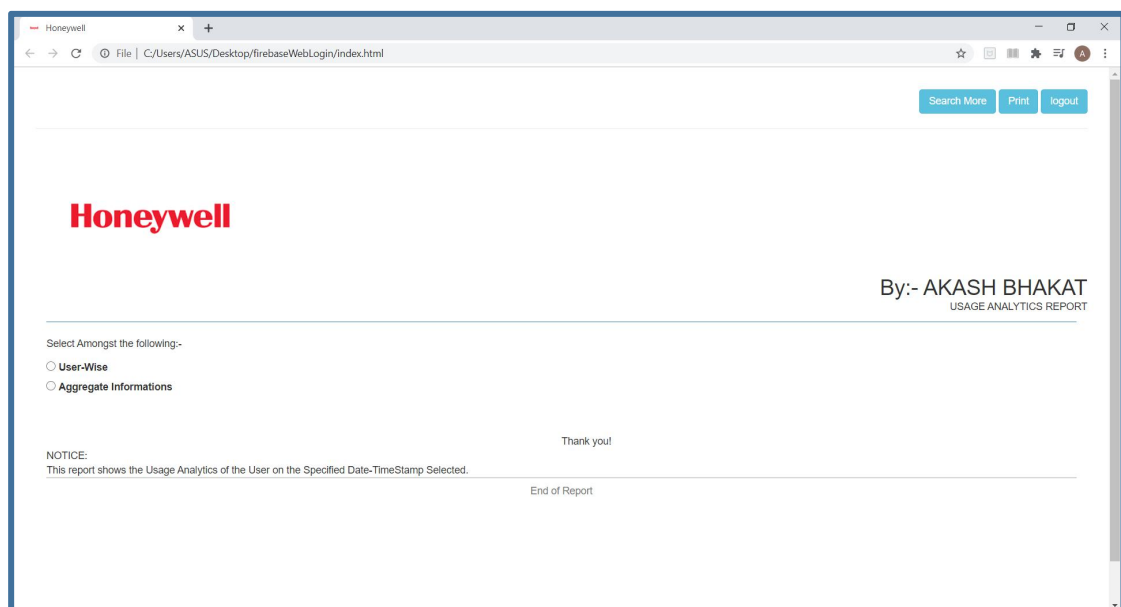


The screenshot shows a web browser window with the URL `C:/Users/ASUS/Desktop/firebaseWebLogin/index.html`. The page has a green header with the text "Login" and a main section titled "ADMIN LOGIN HERE". On the left, there is a large black rectangular area. On the right, there is a login form with the following fields:

- Name**:
- Email id**:
- Password**:

Below the password field, there are two buttons: "LOGIN" and "Not Register Yet".

After login

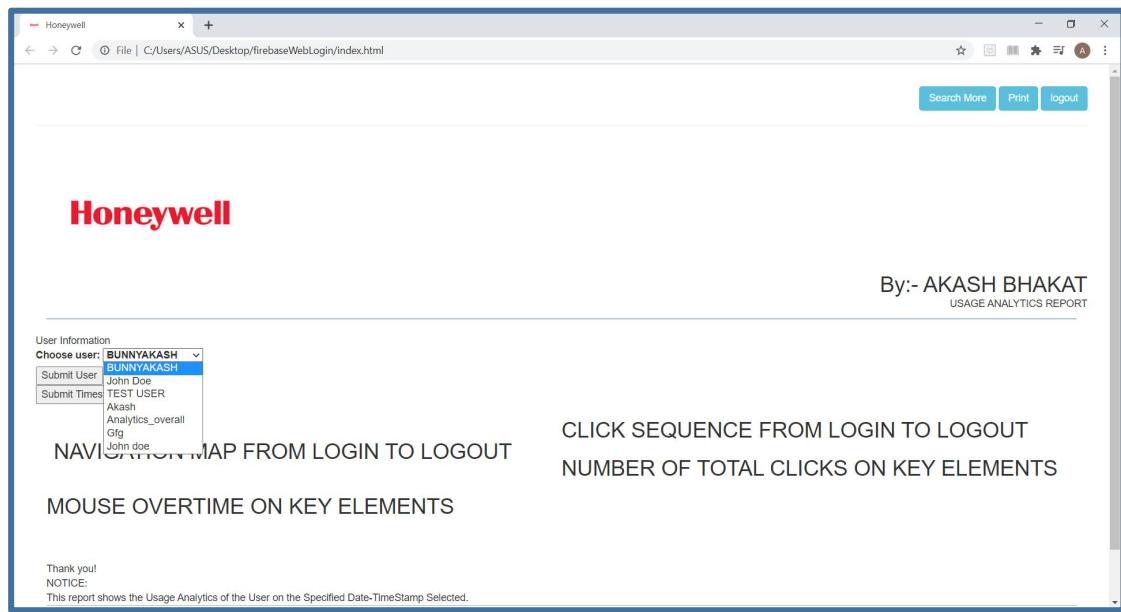


The screenshot shows the admin dashboard after a successful login. The page has a white background with a blue header. In the top right corner, there are three buttons: "Search More", "Print", and "logout". The main content area features the "Honeywell" logo in red. Below the logo, there is a section titled "Select Amongst the following:-" with two radio buttons: "User-Wise" and "Aggregate Informations". On the right side, there is a text block that reads "By:- AKASH BHAKAT" and "USAGE ANALYTICS REPORT". At the bottom, there is a "NOTICE:" section that states "This report shows the Usage Analytics of the User on the Specified Date-TimeStamp Selected." and "End of Report".

As evident from the picture above, the admin can select to view 2 type of data:-

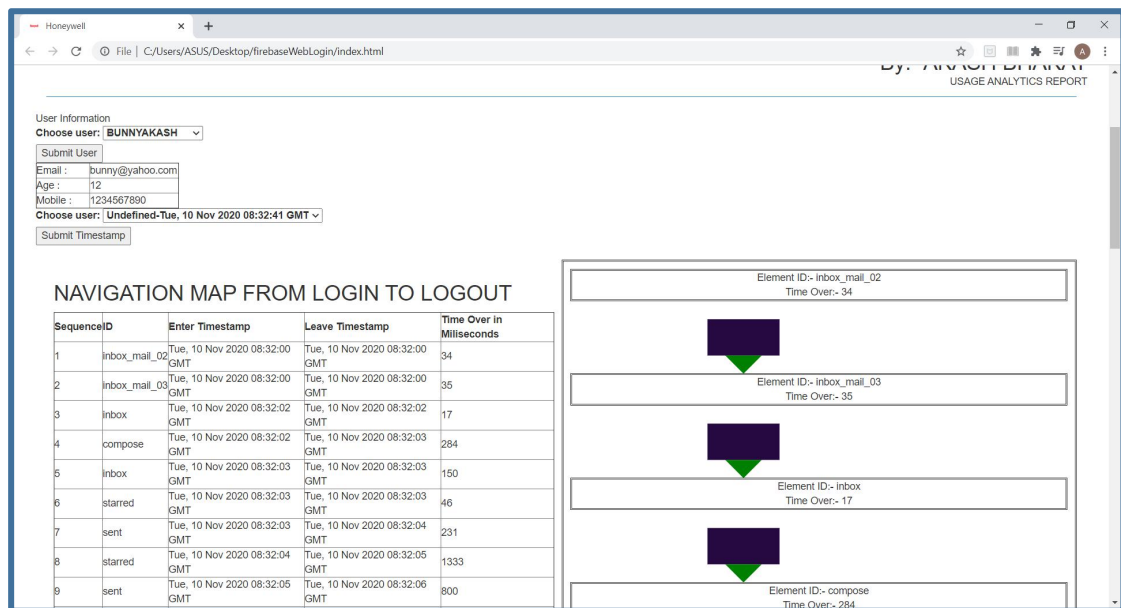
1. User-Wise Data
2. Aggregate Informations

Now the Demonstration of User-Wise Data



From here the User needs to select the User and then click submit.

Then they will be offered a drop down for selecting the timestamp of Usage



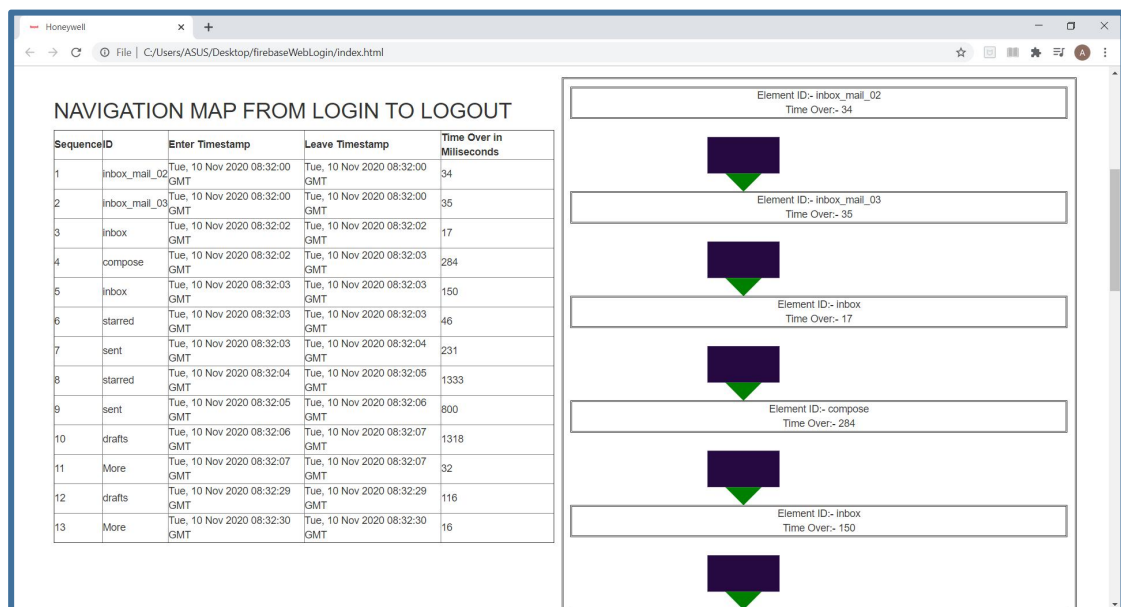
Now we can select the Timestamp

After selecting we get the Data

The following data are displayed :-

1. Navigation Map from Login to Logout. This is shown in the form of a table as well as a flowchart
2. Click Sequence
3. No of clicks
4. Mouse Time over

NAVIGATION MAP



CLICK SEQUENCE, NO OF CLICKS AND MOUSE OVERTIME

CLICK SEQUENCE FROM LOGIN TO LOGOUT

| ID | TimeStamp of Click |
|------------|-------------------------------|
| sent | Tue, 10 Nov 2020 08:32:06 GMT |
| drafts | Tue, 10 Nov 2020 08:32:07 GMT |
| Logout_btn | Tue, 10 Nov 2020 08:32:41 GMT |

NUMBER OF TOTAL CLICKS ON KEY ELEMENTS

| ID | Number of Clicks |
|------------|------------------|
| sent | 1 |
| drafts | 1 |
| Logout_btn | 1 |

MOUSE OVERTIME ON KEY ELEMENTS

| ID | Time in Milliseconds |
|-----------------|----------------------|
| inbox_mail_0234 | |
| inbox_mail_0335 | |
| inbox | 167 |
| compose | 284 |
| starred | 1379 |
| sent | 1031 |
| drafts | 1434 |
| More | 48 |

Thank you!

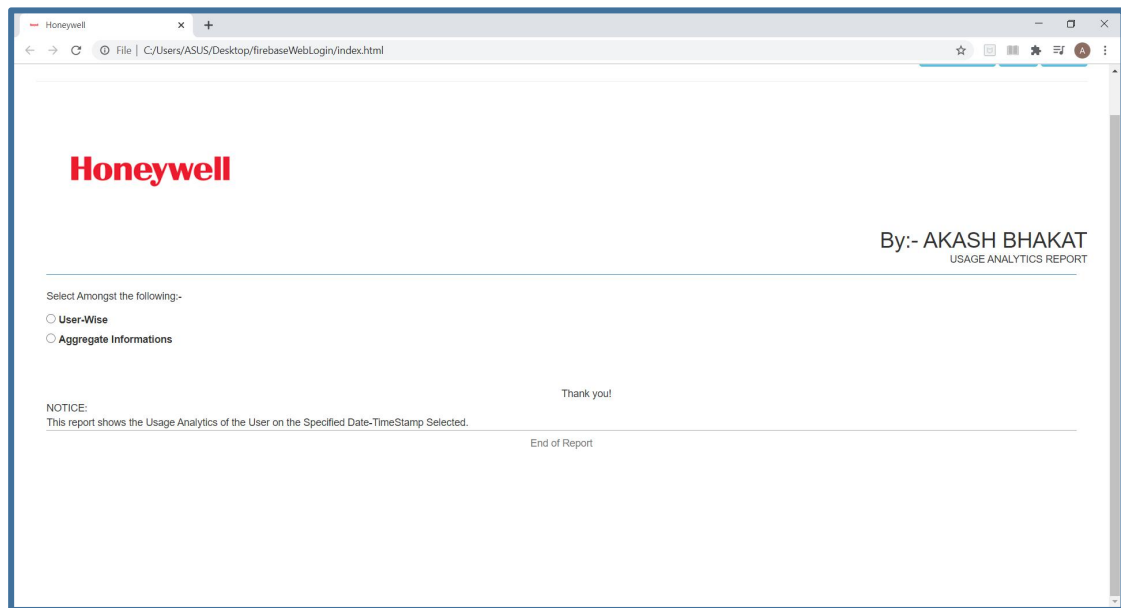
NOTICE:
This report shows the Usage Analytics of the User on the Specified Date-TimeStamp Selected.

End of Report

Also this page allows the Admin to print this page

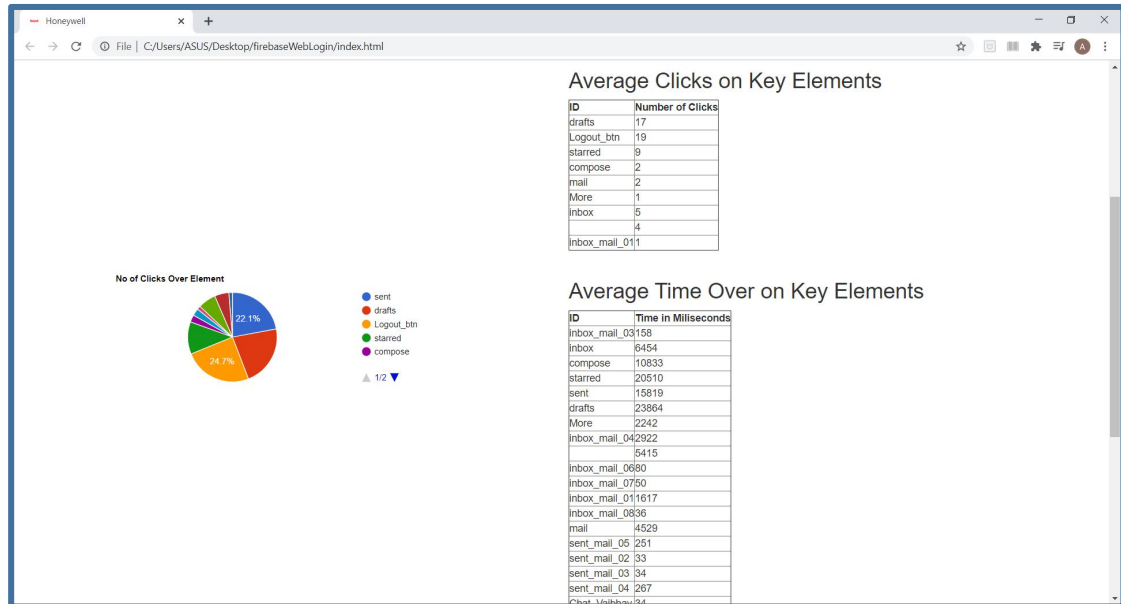
The screenshot displays a web browser window with the address bar showing the file path `C:/Users/ASUS/Desktop/firebaseWebLogin/index.html`. The main content area features a Honeywell login interface. A navigation map overlay is visible, titled "NAVIGATION MAP FROM LOGIN TO LOGOUT". This map illustrates a sequence of events, including "inbox_mail_02", "inbox_mail_03", and "inbox_mail_04", each with associated timestamps and sequence IDs. The browser's developer tools are open on the right, showing the "Elements" panel with a tree view of the page structure, including a "Navigation Map" section. The "Elements" panel also shows a "Save as PDF" button and a "Print" button. The "Print" button is highlighted with a green arrow. The "Navigation Map" section in the developer tools shows a sequence of events, including "inbox_mail_02", "inbox_mail_03", and "inbox_mail_04", each with associated timestamps and sequence IDs.

Now if the admin wants to search for other user, He needs to click on “Search More Button” at the top



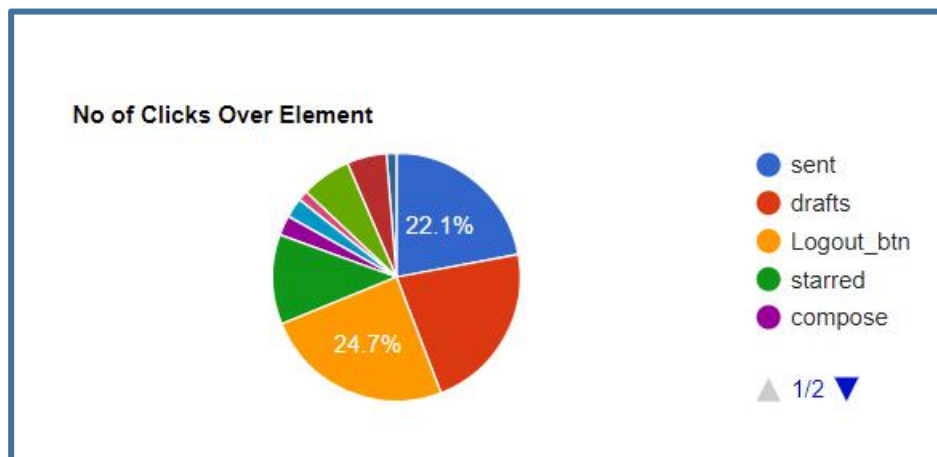
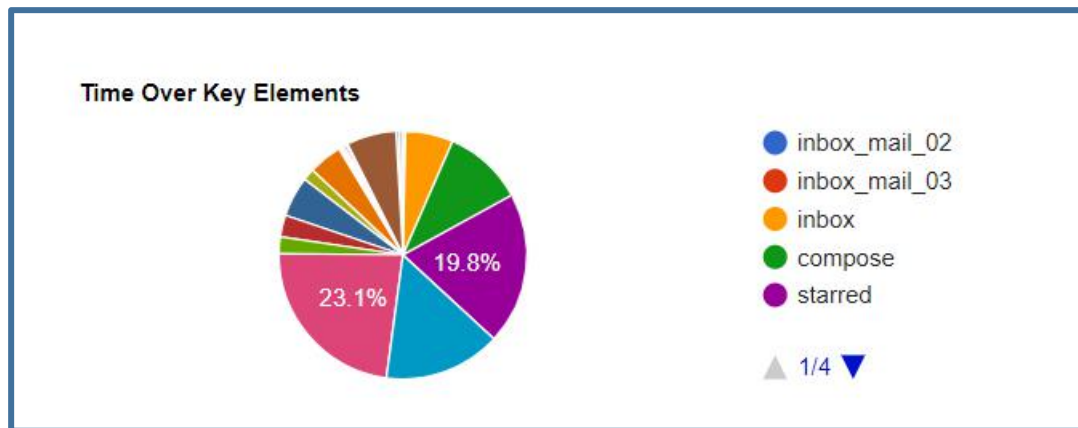
Then the admin can again start to see the initial page to search from.

Now showing the Aggregate Data



This page shows the Total Number of Clicks on Key Elements and Total Time over Key Elements

Also it shows the distributions of these in a Pie chart, to help for quick visualization of most occurring and min occurring occasions for analysis.



Also this page can be printed too by clicking on the Print button at the top.

After the usage the Admin Page has a Logout Button that needs to be clicked upon for the user to Logout.

The Codes and the Algorithms are uploaded on Github and also on the following Google Drive Link. It also contains the explanation of the codes for fast interpretation.

https://drive.google.com/drive/folders/18iN_MHQA9kb-y719JLcSvJfgd7bKY_qp?usp=sharing

For any more Informations I will be happy to help

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