Appifax

Revised Solution prototype – Appifax

Team members:

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Idea:

Ou idea is to better support local businesses that are struggling during the COVID-19 crisis, to help them emerge from the pandemic strong, and help them thrive in the post pandemic world. For the solution, we are developing Appifax, a Halifax point-based membership webapp that can be used for local businesses who require support and partner with our services. There would be members-only offers/prices for certain items at our partner locations, and the user collects points for each order which could then be redeemed at any of our partner locations. Users can start using the app for free. However, there will be premium subscriptions available to them that provide better value. Once tested in Halifax, we can scale it to other cities.

Links:

Project Hosted on GitHub Pages Link: https://syed-space1.github.io/Appifax-CSCI4193/landing.html

GitHub link: https://github.com/Syed-space1/Appifax-CSCI4193.git

Asana Link: https://app.asana.com/0/1200430013615952/overview

Our own grading of the prototype: The Team Graded the prototype and attached it below in this document.

We added the wireframe below as well

PLEASE NOTE*: We made some changes to our project according to your recent feedback:

1. We have added description for each task on Asana.
2. Each team member has their own task on Asana and as Asana only allows one assignee per task so in some tasks you can see multiple team members assigned to one task using the collaborators option.
3. We added a new section on Asana called “Sprint Review” and we moved the relevant tasks to this section.
4. Each team member has their own branch on Github and they pushed their code to their own branch and the code was later merged into the main branch.
5. Modified the Readme file on Github to add information to it.
6. We added the wireframe to this document below which was our first design but it wasn’t used in the final implementation of the project.
7. Added the contact us form to the “Contact us” page of the webapp.
8. Added the Points History button to the customers dashboard which allows the user to see the points and transaction history.
9. For the Landing Page, added the mission statement, added the membership/partnership pricing section which highlights the benefits for customers and local businesses and added an image of Halifax at the end of the landing page to make the landing page more attractive.
10. Fixed whitespace problems in the Customers and Business dashboards.
11. We added comments to our code.
12. The database is working, and the credentials are being stored in the firebase database.
13. JavaScript files are fixed - removed console.log things.
14. We added a password constraint.
15. Removed/fixed the redirection of index.html (customer dashboard) from the business dashboard.
16. Added more details to the answers of the bonus questions 1, 3, 4 and 5 and these answers are attached below in this document. For bonus question 5 we wrote a long and detailed answer.

Detailed Answers for the bonus questions:

1. **Are there any potential issues for scaling the prototype beyond a subset of users? Examples: reliance on a single server to handle the demand, coded for a specific platform**

-After reaching beyond a subset of users, we plan to migrate the webapp to AWS (Amazon Web Services) Cloud as scaling is easier on AWS and it is easier to manage there. AWS is a one-stop shop as it has a lot of tools, we can integrate with our webapp and utilize such as ML/AI/BI. We chose AWS because it provides an environment and services which are highly available and fault tolerant and one example of such service is S3. AWS also has ELB which is elastic load balancer, which will help in balancing load when there is a lot of traffic on our webapp, and we also have plans to containerize our webapp using services such as Docker which has its own benefits.

2. **If the data is sensitive, is it stored in the proper locations? Are API credentials stored in the repo? (They shouldn't be)**

-Yes, the authentication is handled by Firebase and the login/signup data of users is stored safely in firebase. There is no private key stored in the code/repo, the only key we have is an API Key that connects the website to the firebase. Moreover, we checked online just to make sure, and according to Google, the API key is public and sharable.

3. **Does the app collect analytics on user behavior to help improve the UX?**

-No, not yet but we will implement a quick survey in the webapp itself which will help us gauge the performance of the webapp in terms of the UX and the users will be asked to do an optional survey where we will ask them questions which will help us in improving the UI/UX and then we will analyze the survey data to make improvements. We will also implement a heatmap which will help us make better decisions for the UX as then we will be better able to see which feature/button or option the being is used the most and we will work on making those specific features better and easier to use for the users. If possible, we plan to utilize machine learning if it can help us in better accomplishing the tasks mentioned above in this answer.

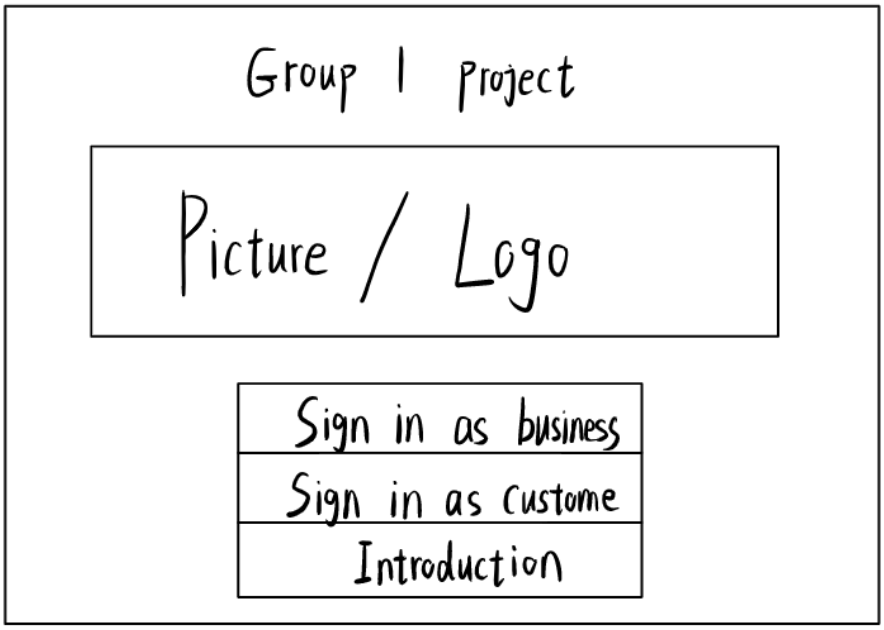
4. **Deployed to a URL if a web app, or test devices provided if it is a platform-specific app? Note: the whole app needs to be deployed for 4 points, for the landing page 2 points.**

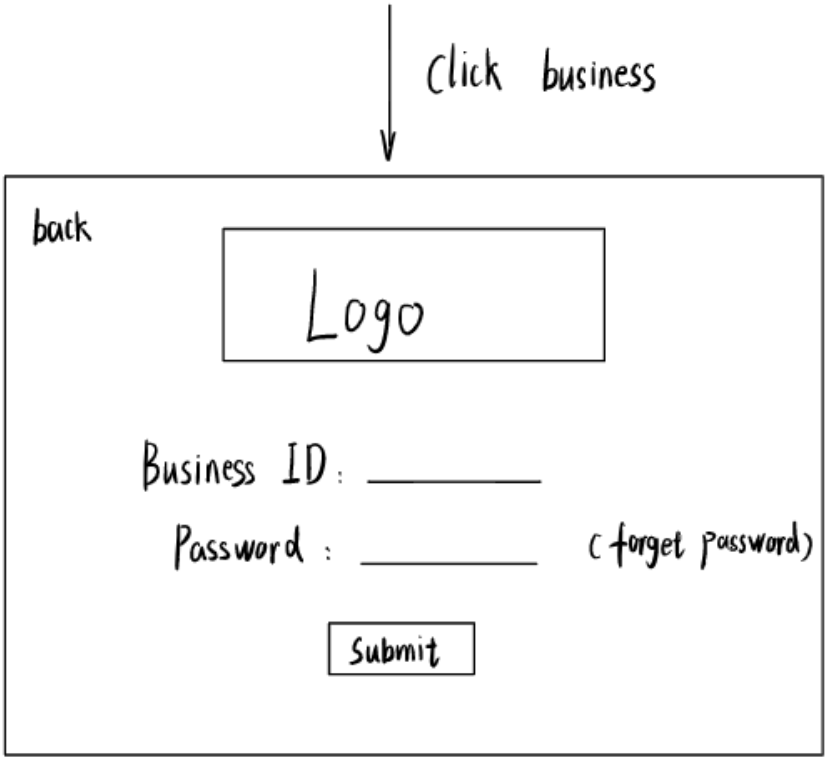
-Yes, the WebApp/Landing Page is deployed on GitHub pages and the link is provided above. The whole webapp is deployed as well as the Landing page. The webapp is not platform specific but platform agnostic as it can be accessed from any platform/device.

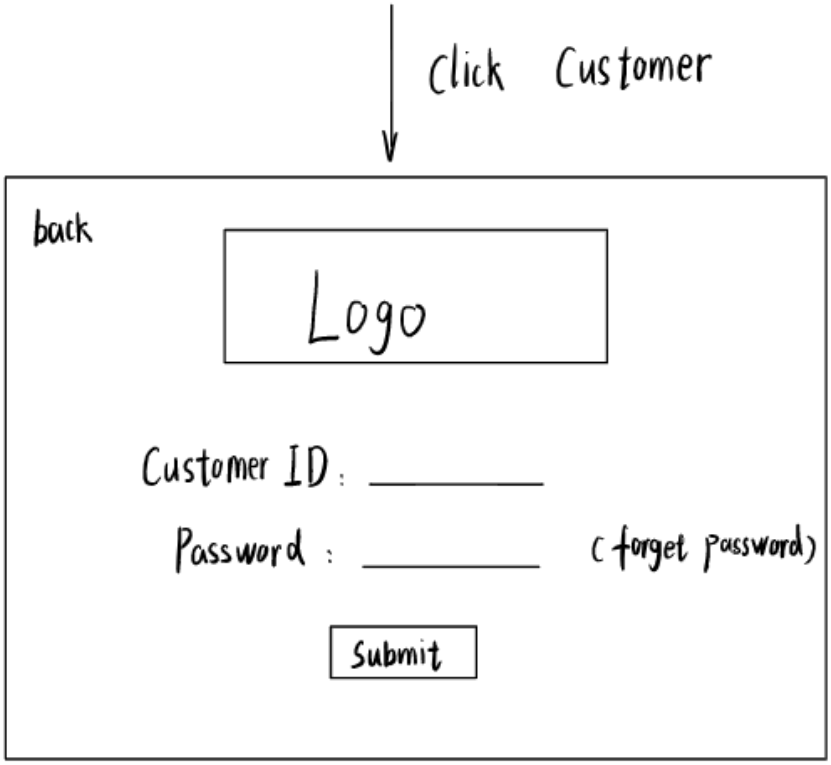
5. **Does something interesting – for ex., mockup available, machine learning, data aggregation/visualization, IR techniques (anything you think may qualify as an extra) (could be theoretical proposal)**

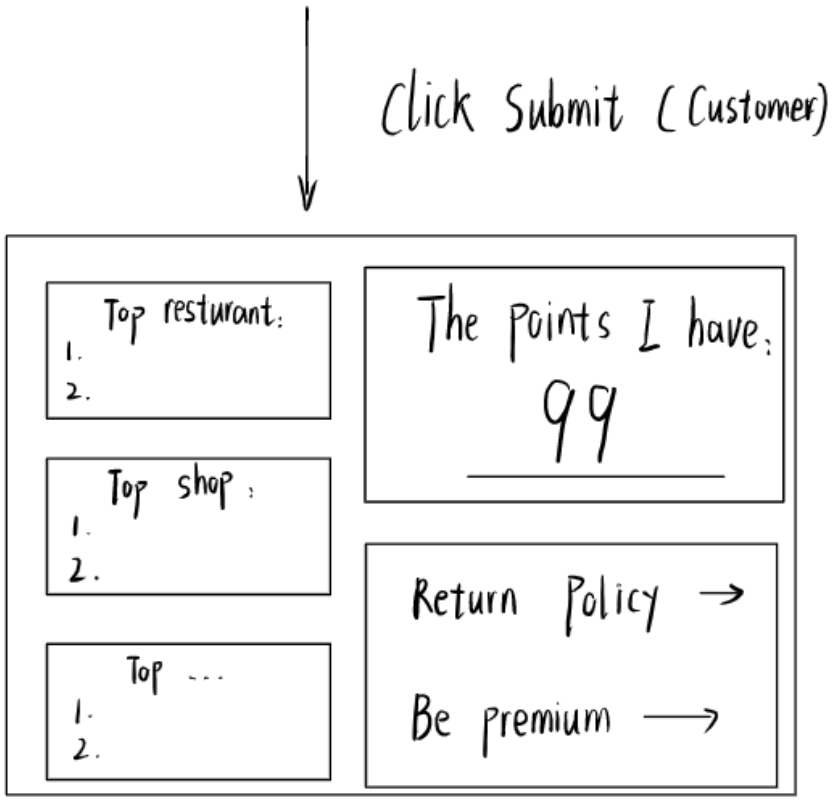
-The wireframe is attached in this document below. We plan to use and integrate machine learning to our webapp which will allow us to recommend offers/deals/discounts from local businesses and local businesses themselves to the Customers (members) based on their previous activity on our webapp, and we can do that by using Amazon Personalize which uses ML algorithms to give personalized recommendations. For the business side of our webapp we plan to use Amazon quick sight which is a ML powered Business Itelligence tool and dashboard which displays all the useful info the business needs in one dashboard. We also plan to make a quick survey to help customers and local businesses make a better decision on which plan to choose where they will answer simple questions and then based on that they will be recommended a suitable plan for them. We also plan to make a chatbot using Amazon Lex and integrate it into our webapp/landing page which will answer common questions and FAQs using text and also Amazon Lex can be integrated with the dedicated phone line to do simple tasks such as checking your Appifax points balance as it uses natural language understanding and automatic speech recognition according to (Amazon Lex, n.d.). Although this will be the number 1 priority and an ongoing process, we also plan to come up with strategies to make sure the data of users and local businesses are safe and secure. We also plan to make a professional video presentation which shows our Webapp being used and highlighting its benefits and that video will be added to our landing page/webapp and will also be used for investments and pitching purposes.

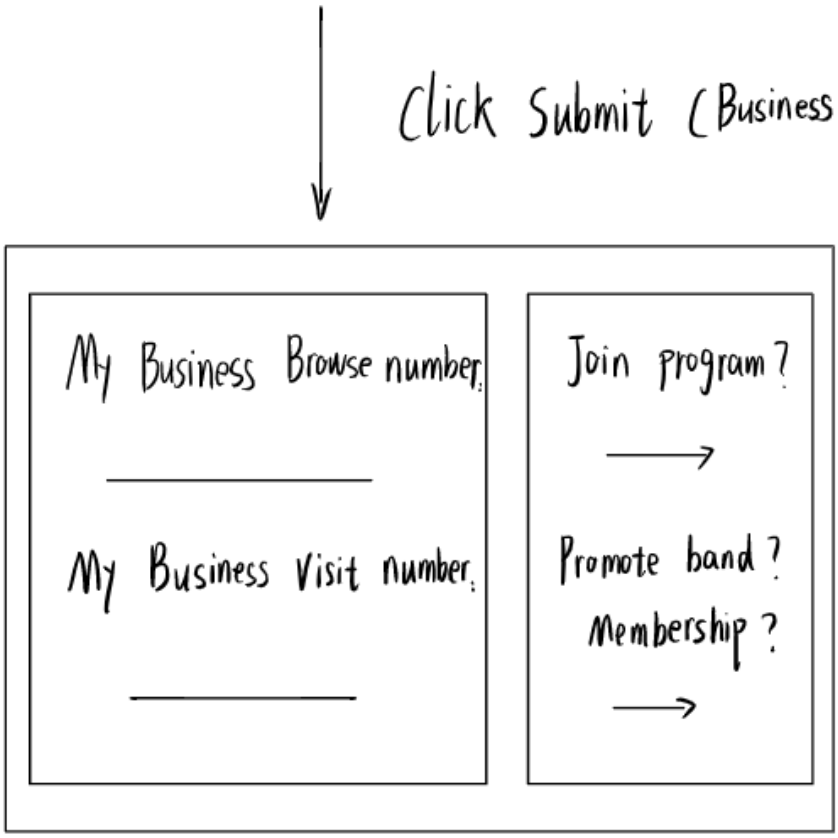
Wireframe:


Group 1 project
Picture / Logo
Sign in as business
Sign in as custome
Introduction


click business
back
Logo
Business ID :
Password :
(forget password)
Submit


click Customer
back
Logo
Customer ID :
Password :
(forget password)
Submit


Click Submit (Customer)
Top resturant:
1.
2.
Top shop:
1.
2.
Top ...
1.
2.
The points I have:
99
Return Policy →
Be premium →


Click Submit (Business)
My Business Browse number:
My Business Visit number:
Join program?
Promote band?
Membership?

Category	Comments	Points
Team Collaboration	We had a good team collaboration	40
Well defined milestones and tasks	We used Asana.	20/20
The level of usage for project management (sprints, task assignments, etc., git activity follows the Asana activity)	We utilized Agile Methodology by doing sprints, task assignment and having regular standup meetings with the team, we pushed code to GitHub according to the tasks on Asana.	19/20
Completeness	As a prototype/ pre-MVP	20
Does the prototype run?	Yes	5/5
Any bugs if running?	No	5/5
Does it have a real backend data or is it just a front-end with	Yes, it has a Frontend and a Firebase Backend	10/10
Code Quality	Quality talks!	15
Is the code self- documenting? Are variables, functions, classes, etc. named clearly? Are tricky parts of the code.	Yes, we tried our best.	4/5
Are the git commits granular and well explained?	Yes	5/5
Does the code follow the conventions of the framework it's written in? Or does it take shortcuts (ex. relying on global	Yes	5/5
UX & UI	All for the user!	25
Onboarding: How long does it take the user to get up and running on the app?	Time Measured and it comes to +-11 seconds.	5/5

How many taps/clicks does it take to perform key actions?	3 taps/clicks to perform key functions such as signup/login.	5/5
Are there significant lags at any point?	No.	5/5
Is the app confusing to use?	No, it is easy to use.	5/5
App design is acceptable for a non-technical user	Yes, it is.	5/5
Bonus: Scalability, security & analytics***		+20
Are there any potential issues for scaling the prototype beyond a subset of users? Examples: reliance on a single server to handle the demand, coded for a specific platform	After reaching beyond a subset of users we plan to migrate the webapp to AWS Cloud as scaling is easier on AWS and it is easier to manage there. AWS is a one-stop shop as it has a lot of tools, we can integrate with our webapp and utilize such as ML/AI/BI.	6/6
If the data is sensitive, is it stored in the proper locations?	Yes, the authentication is handled by Firebase and the login/signup data is stored safely in firebase.	2/2
Does the app collect analytics on user behaviour to help improve the UX?	No, not yet but we will implement a quick survey in the webapp itself which will help us gauge the performance of the webapp in terms of the UX and we will also implement a heatmap which will help us make better decisions for the UX.	4/4
Deployed to a URL if a web app, or test devices provided if it is a platform-specific app? Note: the whole app needs to be deployed for 4 points, for the landing page 2 points.	Yes, deployed on GitHub pages and provided the link above. The whole webapp is deployed plus the landing page and the webapp is no platform specific but platform agnostic as it can be accesses from any platform/device.	4/4

Does something interesting – for ex., mockup available, machine learning, data aggregation/visualization, IR techniques (anything you think may qualify as an extra	Yes, the mockup/prototype is available and hosted on GitHub pages for you to see.	4/4
Note: Responsiveness to team requests and meeting attendance is graded	Our Team was very responsive and meeting attendance were great.	
Based on Criteria developed by Dijana Cosmajac & Allan		

References:

- W3Schools. Bootstrap Templates.

  https://www.w3schools.com/bootstrap/tryit.asp?filename=trybs_temp_analytics&stacked=h.

- Firebase. *Add Firebase to your JavaScript project*. Google.

  https://firebase.google.com/docs/web/setup.

- Amazon Lex. (n.d.). Amazon AWS. Retrieved July 10, 2021, from https://aws.amazon.com/lex/