FINAL DESIGN REPORT

CSC 238, Fall 2019

Hello? HANG UP!

Stop mobile addiction

Group Members

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Problem

Smartphone addiction, sometimes colloquially known as “nomophobia” (fear of being without a mobile phone), is often fueled by an Internet overuse problem or Internet addiction disorder. Phone itself is not to blame, a smorgasbord of games and myriad of apps are equally responsible. People suffering from nomophobia commonly show signs of uncontrollable impulse to operate their phone. Nomophobes often find themselves not socializing or fairing poorly in academic life. Phone addiction is not only bad for health but is also catastrophic for social, academic and financial life.

Solution

Our proposed solution - Hello? Hang Up! - is a mobile application that will have knowledge of user’s phone usage patterns and statistics and will provide multiple different ways to combat phone addiction. Ranging from simple measures such as sending stop notifications to severe measures such as switching off the phone is provided in the application. We have realized that to help user control their impulse, merely switching off the phone is not a guaranteed solution. So, we provide user an option to input their favorite image, video, audio, text into the application which will then be displayed/played along with previously defined measures by the app when overuse of phone is detected. This helps to mitigate the intensity of impulse and placate the user’s frustration that might stem from the measures the application will take. We realize that attacking the root of cause of impulse (dopamine release in brain) will yield greater rewards and thus we try to deviate or lure user from phone to food and free stuff (which has equivalent or more dopamine release) by providing them as rewards for not using the phone for set amount of hours and achieving certain milestones.

Design Research Goals, Stakeholders and Participants.

Design Research Goals:
Before conducting the design research we had few hypotheses about human psychology. The goal of our deign research was to solidify our hypothesis and develop empirically grounded theories on addictive psychology while acquiring more data/information on end-user habits increasing the robustness of application design and making it more usable and accessible.

Stakeholders and Participants:
Due to limited resources, we interviewed only 3 individuals. Interview was conducted at user's convenience to get the most of the interview.

- One of our target participants is a working professional, aged 28 years, Anand. Anand has a background in chemical engineering and works as a project manager. A contextual inquiry was conducted on the Anand on a weekend at his home to understand how he used his phone and get more insights on working professional usage patterns.
- Vanessa Abing, aged 26, a working professional at our community leasing office actively participated in interview and helped us answer unanswered questions.
- Emma Carson - 19, a freshman, pursuing sociology was interviewed for approximately 2 hours near Riverfront hall. This interview helped us discover many new things and was very significant to design research.
- Ramiro Bazan, an undergraduate computer science student was interviewed at university library. The interview was a master-apperentice interview and helped us get detailed insights on the psychology of overuse.

Our stakeholders are the food and shopping companies. Our app has rewards features that provides free food and shopping gift cards and thus free advertisement for food and shopping companies. Additionally, government and universities can take an active role in promoting this application and help the addicted students and citizens.

Design Research Results and Themes

Common Practices

We observed the following practices commonly emerging among all the participants

- Participants frequently use their phones to browse social media applications for various reasons like posting pictures, shopping, looking at latest trends, reading news and articles etc.
- Participants want to relive the moment, so they use their phone extensively for taking pictures of all the small occurrences in life.
- One common trend we found is that participants binge watch web-series and movies on video streaming applications.

Problems

- The participants find following problems while trying to control their urge to use their phones
- Eye-catching and bespoke news articles, magazines and journals makes it hard to control the impulse of reading it. Article once opened, users then read through multiple articles without being aware of how much time is wasted.
- Shopping glues participants to shopping websites and their recommendations makes it difficult for participants to move on to higher priority tasks
- Recommendation features sway users into exploring more apps and websites.

Theme

- Each of the participants have their reason to overuse the phone. The reason seems important when they use their phones but later they regret it. This is because their impulse forces them to believe that using the phone at that moment is useful. Participants cannot stop this impulse.

Task Analysis Questions

Who is going to use the design?

All individuals, irrespective of their profession, age, sex etc. who are addicted to mobile phone and need help controlling their impulse.

What tasks do they now perform?

The participants either make use of existing applications or try to control the impulse of using phone on their own. Furthermore, few participants have been to addiction relief organizations and counsels to combat their addiction.

What tasks are desired?

A more bespoke and sensitive app that understands the cause of user's impulse and try to combat that. Participants desire tasks such as setting a time goal for which they will refrain from using their phone.

Participants desire a task to select different modes like student, family, work etc. and select the level of strictness the app will follow to stop overusing the phone.

How are the tasks learned?

The tasks are learnt by referring the instructions manual page in the app.

Where are the tasks performed?

As the mobile is handy device which can be used everywhere, hence the tasks related to mobile phone can be performed anywhere, anytime.

What is the relationship between the person and data

The relationship between people and data gave us information on different categories and the of mobile apps that each target participant uses and their overall phone usage along with other latent statistics such as the number of hours spent on a particular app, app-wise hourly usage, patterns of using applications etc.

What other tools does the person have?

There are currently various apps available online to combat mobile addiction.

How do people communicate with each other?

The participants use their phones primarily for most of the tasks including communication. Social media apps such as Facebook Messenger, Instagram are used for chatting, Whatsapp is used for sharing texts and files. Participants also have the urge to use Snapchat, Instagram, Facebook and Whatsapp stories to share their day to day experiences on a video or picture. Overall, it can be seen that personal physical communication has reduced drastically.

How often are the tasks performed?

Mobile phones are addictive. So the tasks are performed on a daily basis for a good part the day.

What are the time constraints on the tasks?

Participants are mobile phone addict, so there are no time constraints on the tasks.

What happens when things go wrong?

If things go wrong the person would still be a mobile-phone addict.

Design Sketches

1. Task: View Usage Statistics

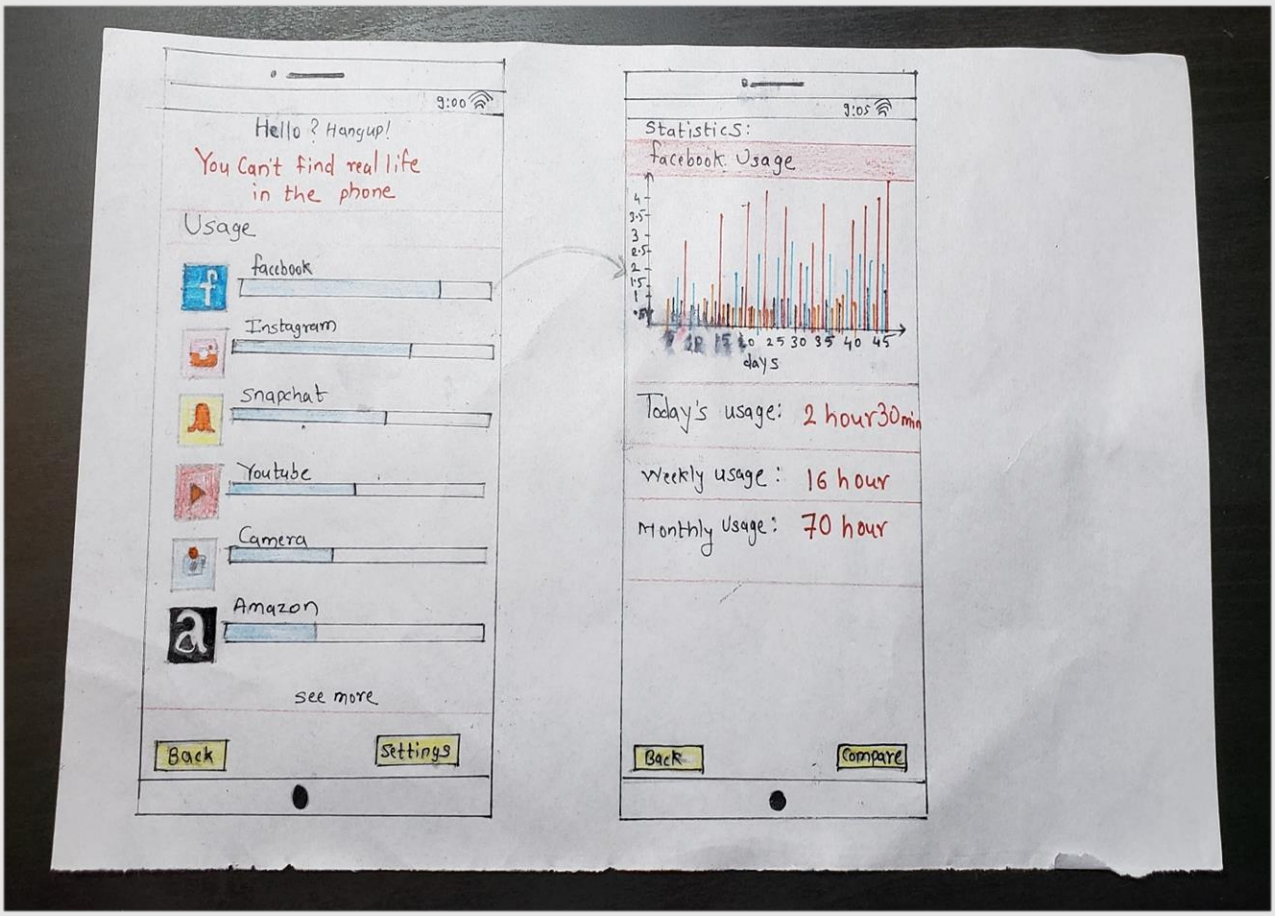

Fig.1 App Usage Statistics

1. Daily usage hours for each application.
2. Detailed usage view for particular application

Users can view their daily usage of phone by opening the app usage statistics window. Users can view the usage by number of hours used daily for each application. Furthermore, users can also click on any application to expand the statistics and get a detailed description (Daily, Weekly and Monthly hourly usage) of the app usage. Users can also compare their usage patterns.

2. Task: Set Preferences

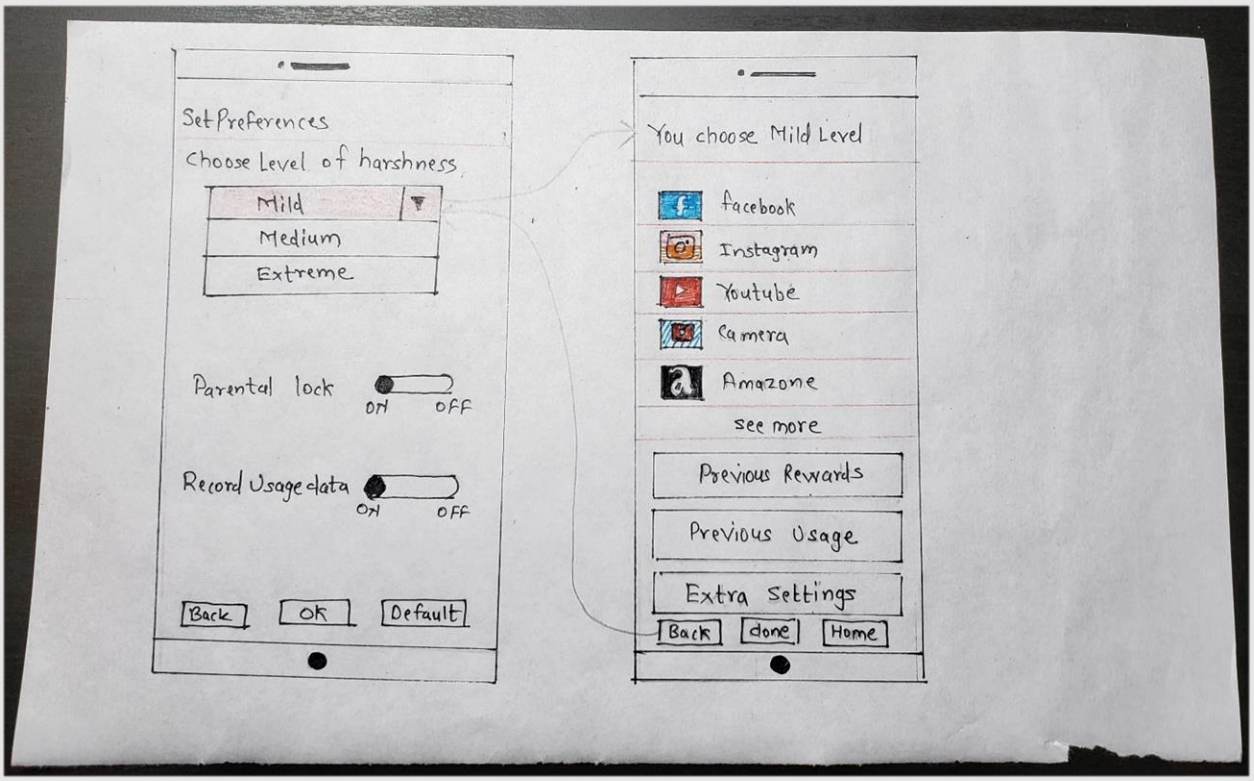

Fig.2 Preference screen.

1. Set basic settings. 2**.** Set Advanced settings for each level of harshness.

User can set preferences and change the basic settings of the application. Users can select the level of harshness the app will take and also set other preferences like parental lock and record usage data. If user selects default, mild will be applied as level of harshness and parental lock will be set to off. Record usage data, however, will be set to on. User can see detailed view of each level and set additional settings for that level. Users also have the option to view the usage data and rewards achieved previously using the selected level of harshness.

3. Task: Add Inspirational Video and/or Audio and/or Text

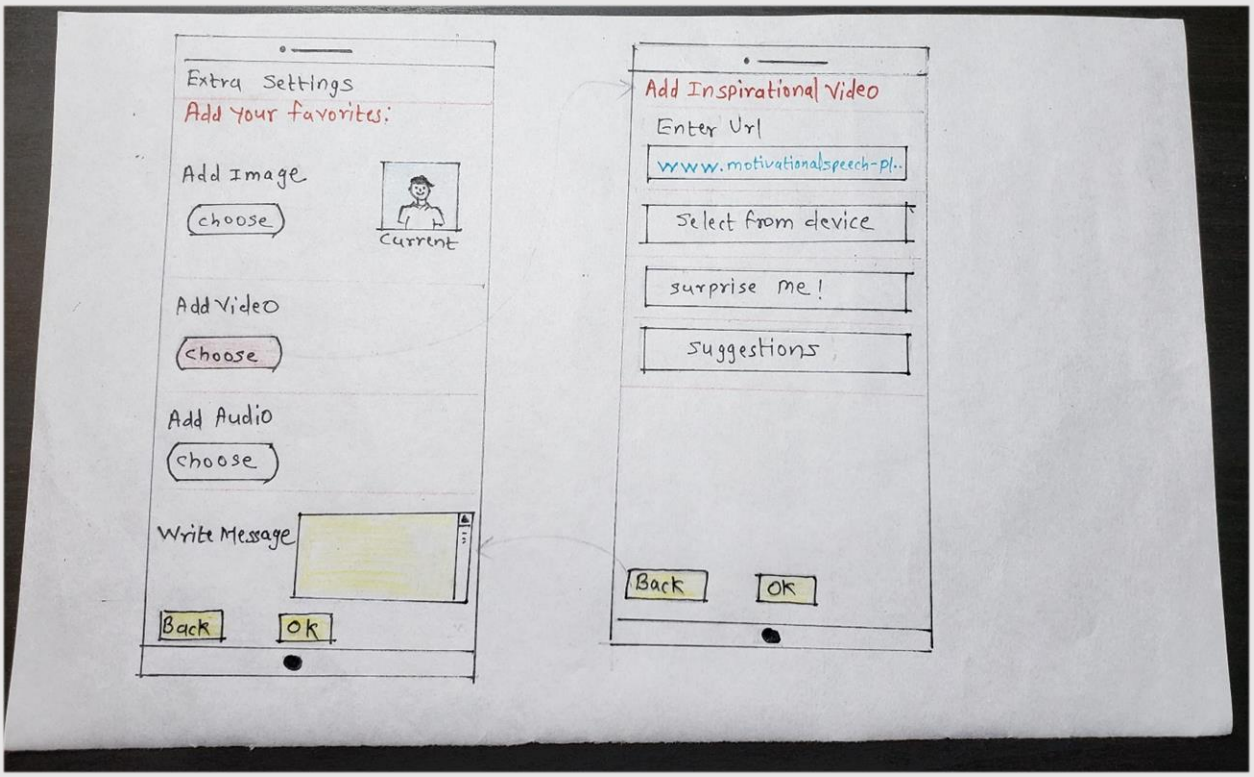

Fig 3. Screen to add inspirational media.
1. Add either of the media. 2. Further options to select the media.

This screen provides a way for user to add their own inspirational media. Users will click on choose to select the media. Choose will open new window which will have customization options. Users can either enter URL to get the media from online or can upload the media from device. Users can select ‘surprise me’ to receive new inspirational media everyday. If user is unsure about the media to upload, user can select suggestions and app will provide few good suggestions.

4. Task: Redeem Rewards

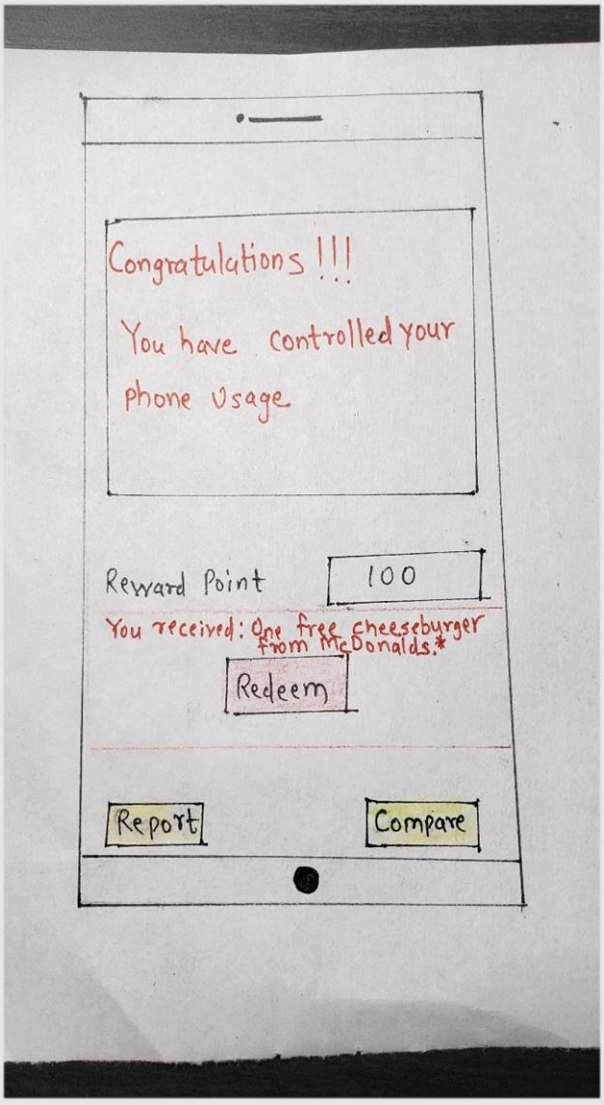

Fig 4. Redeem Rewards

After user has achieved a certain milestone of not using the phone, he/she can redeem the rewards earned. To redeem the rewards, user will make use of the redeem rewards page where he/she will gain knowledge of the amount of reward point earned and what is the reward received. User can then click on the redeem button to proceed with redeeming the reward.

Scenarios

Scenario 1: Joey, a Phone addict struggling with his studies.

1. Joey is severely addicted to social media platforms like Facebook ,Instagram, Snapchat etc. and is suffering from nomophobia. As a side effect of this, he suffers from insomnia and is struggling to complete his assignments on time.
2. Joey gets anxious and searches different ways online to curb his smart-phone addiction. He comes across “Hello? Hang up!” app and decides to download it.
3. After he downloads the app, it notifies him with his current usage statistics. It also displays a high addiction score for him.
4. He then sets the level of severity to high and the app starts to track his phone usage.
5. Initially, Joey gets a high addiction score and so an inspirational video pops up which conveys a message to stop smart-phone addiction.
6. Despite this, he continues using his phone for large intervals of time and the app detects this activity and locks his phone.
7. Joey realizes his mistake and is now focused on other activities such as studies, sports and spends quality time with his family.

Scenario 2: Jacob, a social media addict.

1 Jacob is constantly engaged on social media and feels the need to curb his is smart-phone addiction. His friend Bob suggests him “Hello? Hang Up!” app to overcome his nomophobia and guides him with using different features of the app.

2. After he downloads the App from appstore , Jacob navigates through different features of the app.

3. He stumbles upon a feature in which users can set app usage time and earn rewards points when they complete their goal.

4. Jacob finds this feature quite useful and chooses the level of difficulty to moderate and sets his goal of using Instagram daily for merely one hour.

5. After the goal is set, the app tracks the daily usage of Instagram by Jacob.

6. Jacob is now busy with other chores and succeeds in completing his goal.

7. In doing so, Jacob accumulates daily reward points and after he completes 50 points the app notifies Jacob with different rewards.

8. Jacob is elated when he receives rewards notification and chooses Double Cheese burger from McDonalds to redeem his reward.

Storyboards

Storyboard 1:

Fig 1.a
Joey suffers from Nomophobia. He is addicted to social media applications that he uses day and night

Fig 1.b
Joey spends most of the time on his phone which prevents him from completing his assignments on time.

Fig 1.c
Joey seeks help and looks up for ways to combat addiction. He comes across this interesting mobile-app 'Hello? Hang up!'

Fig 2.a
Joey downloads 'Hello? Hang up!' app and views how many hours he spends on his phone

Fig 2.b
'Hello? Hang up!' app determines mobile addiction score to be very high

Fig 2.c
Joey begins using the app which tracks his phone usage to warn and play inspiration videos to get Joey out of his mobile addiction

Fig 3.a
One day, Joey finds his apps locked because of the high severity level. He realizes he needs to control this mobile addiction

Fig 3.b
Joey now spends more time with family, completes his assignments on time. He finds the addiction score to be reduced. 'Hello? Hang up!' brings the difference in his life

Fig.5 Storyboard of Joey

Storyboard 2:

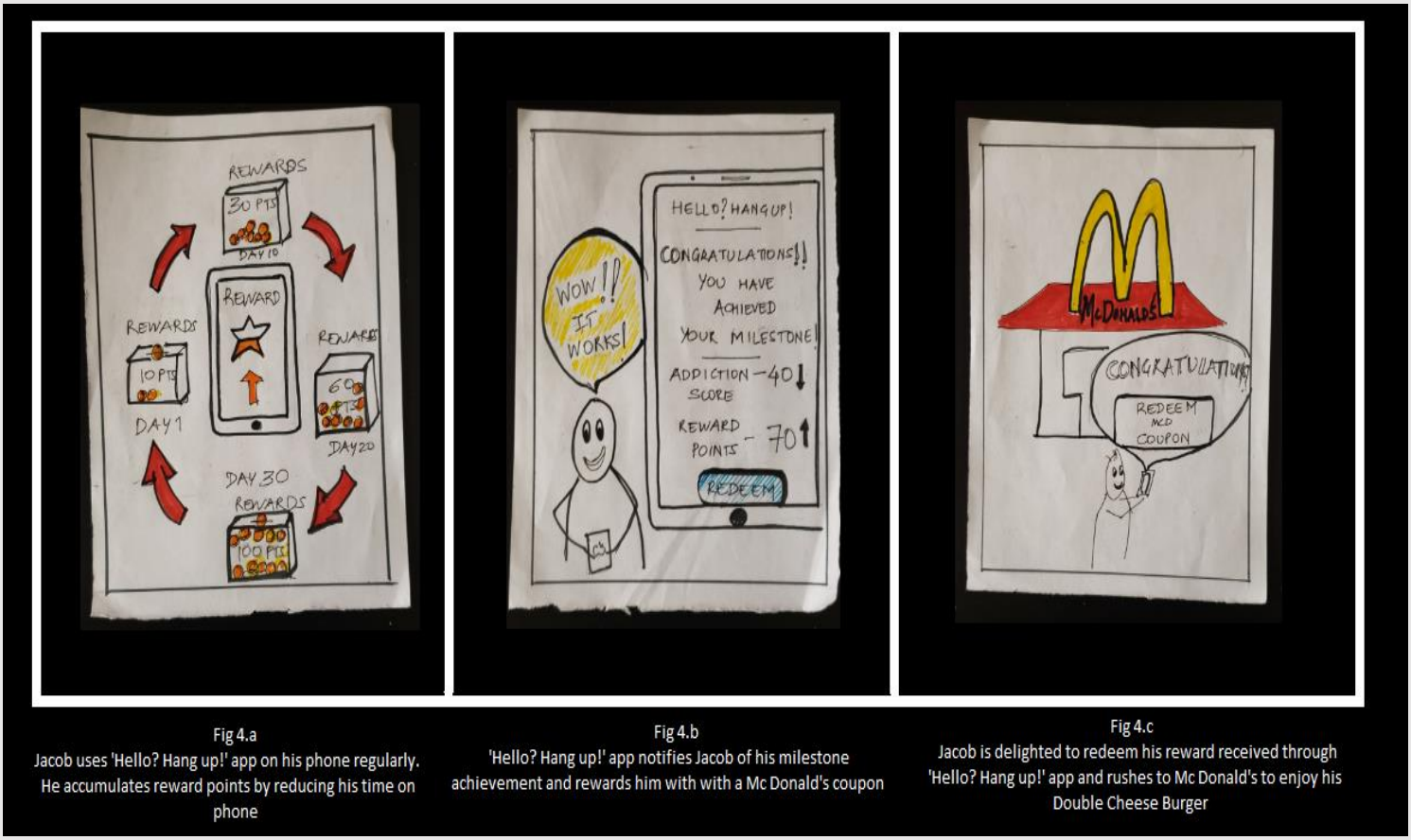

Fig 4.a
Jacob uses 'Hello? Hang up!' app on his phone regularly. He accumulates reward points by reducing his time on phone

Fig 4.b
'Hello? Hang up!' app notifies Jacob of his milestone achievement and rewards him with with a Mc Donald's coupon

Fig 4.c
Jacob is delighted to redeem his reward received through 'Hello? Hang up!' app and rushes to Mc Donald's to enjoy his Double Cheese Burger

Fig.6 Storyboard of Jacob

Group Members and Roles

Harsh Gupta: Problem & Motivation, Design Research Goals, Stakeholders & Participants, Task Analysis, Storyboarding, Sketches

Amit Kulkarni: Written Scenarios, Storyboarding, Sketches, Design Research results and Themes

Gargi Prabhugaonkar: Task Analysis, Storyboarding, Sketches, Design Research results and Themes

Ninad Jadhav: Storyboarding, Sketches, Written Scenarios, Task Analysis.