

# **Mobile Application Design Document**

**KickAsh**

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# 1. App Overview

## 1.1 Introduction

The development of mobile platforms is advancing at an accelerated pace, introducing a wide range of applications that can be conveniently operated on smartphones. This enables individuals to perform various tasks and engage with diverse mobile applications without leaving the comfort of their homes. Moreover, mobile technology has proven instrumental in addressing numerous health concerns and promoting a healthier lifestyle.

The primary objective of this project is to serve as a counselor and guide for individuals who aspire to quit smoking. Rather than employing the abrupt "cold-turkey" method, where smoking is immediately ceased after years of continuous use, this project adopts a scientifically proven approach that emphasizes gradual control. Through the implementation of a system-notification system, the mobile app assumes the role of a compassionate yet firm guardian, consistently motivating users to quit smoking and prioritize their health.

The app closely follows the different techniques and ideas from the best selling book "Allen Carr's Easy Way To Stop Smoking". It also incorporates a 30-day timetable system that provides practical and straightforward steps to help users distract themselves from smoking throughout the day. By gathering information from users regarding their smoking history, such as the number of years they have been smoking, the app utilizes pattern recognition algorithms to recommend a personalized timetable for smoking during the initial days. The recommended number of cigarettes to smoke per day gradually decreases, taking into account factors such as gender, age, and duration of smoking.

In summary, this project leverages the rapid advancement of mobile platforms to offer a supportive and personalized quitting strategy for smokers. By employing a gradual and data-driven approach, the app aims to empower users to successfully overcome their smoking habit and prioritize their well-being.

## 1.2 Problem Domain:

Cigarette smoking stands as the primary cause of preventable death worldwide, with more than 480,000 deaths occurring annually in the United States alone, accounting for nearly one in five deaths [1]. A significant portion of adult smokers, approximately 68.0% (22.7 million), expressed a desire to quit smoking in 2015, while over half of them attempted to quit within the past year [1]. In 2018, approximately 7.5% of adult smokers (2.9 million) successfully achieved smoking cessation [3].

When attempting to quit smoking, 31.2% of adult smokers (7.6 million) sought assistance through counseling or medication in 2015 [3]. Supported by the aforementioned research and facts, it is evident that counseling effectively aids individuals in their quest to quit smoking. In fact, counseling nearly doubles a smoker's chances of successfully quitting and maintaining abstinence for at least one year. The approximate cost associated with each case of sustained smoking cessation due to counseling availability is \$1300 [4]. This expense is considerably high, highlighting the focus of this project: to provide the most affordable option for those seeking to overcome smoking addiction.

The primary objective of this project is to address this issue by making the most economical solution accessible to individuals aiming to quit smoking.

Smokers who want to quit face numerous challenges, including addiction, cravings, a lack of motivation, and limited access to personalized support and resources. They often struggle to find effective strategies that work for them.

This app addresses these challenges by providing personalized support tailored to each user's needs. The app's tracking tools, motivational support, community features, and educational resources combine to offer a comprehensive solution that enhances the chances of successful smoking cessation.

### **1.3 Target Audience**

The target audience of "KickAsh" includes adult smokers who have expressed a desire to quit smoking and are actively seeking assistance in their quitting journey.

### **1.4 Supported Platforms**

We will be supporting the Android platform for the moment.

## 2. App Functionalities

### 2.1 MAIN FUNCTIONALITIES

The main features of the app are as follows:

- **Smoking Habit Tracker:** The app features an intuitive and easy-to-use smoking habit tracker that allows users to log their smoking habits accurately. Users can record the number of cigarettes smoked, triggers that lead to smoking, cravings experienced, and the times of day when they typically smoke. The tracker may also include additional data points like locations, mood, and associated activities.
- **Health Progress Tracking:** Users can track their health improvements through the app. It provides visual representations of their progress, such as charts or graphs, to show the positive impact of quitting smoking on their health. The app may calculate and display metrics like saved money, reduced carbon monoxide levels, improved lung capacity, decreased heart rate, and lowered risk of smoking-related diseases.
- **Motivational Support:** The app will provide personalized messages, reminders, and virtual rewards to motivate users throughout their quitting journey. These motivational elements are tailored to each user's progress, milestones, and personal preferences. Messages may include encouraging quotes, tips for managing cravings, or reminders of the health benefits of quitting.
- **Community and Social Features:** The app will foster a supportive community where users can connect with others who are on a similar quitting journey. It may include features like discussion forums, chat groups, or social feeds where users can share their experiences, provide support, and exchange tips and advice. The app may also organize challenges or group activities to encourage healthy competition, camaraderie, and shared goals.

- **Educational Resources:** "KickAsh" will offer a rich library of educational resources to help users understand the harmful effects of smoking, learn coping strategies for cravings, and gain knowledge about the benefits of quitting. These resources may include articles, videos, interactive quizzes, expert advice, and success stories to inspire and inform users.

## 2.2 ADDITIONAL FUNCTIONALITIES

These are the future functionalities that may be developed at a later time.

- **Gamification:** The app may include gamified elements to make the quitting process engaging and rewarding. Users could earn badges or level up based on their progress, participate in virtual challenges, and unlock achievements for reaching milestones or adopting healthy habits. Gamification adds an element of fun and motivation to the quitting journey.
- **Personalized Recommendations:** Using data analytics and machine learning algorithms, the app can provide personalized recommendations for quitting strategies, coping mechanisms, and resources based on individual preferences and patterns. These recommendations take into account factors like smoking history, triggers, past successes, and user feedback.
- **Integration with Wearable Devices:** "KickAsh" can integrate with compatible wearable devices, such as fitness trackers or smartwatches. This integration allows users to sync their app data with these devices, providing additional health-related insights like heart rate variability, physical activity, sleep patterns, and stress levels. This comprehensive health tracking enhances the user's understanding of the positive changes occurring during their quit journey.

- **Professional Support:** The app may provide options for users to seek professional help through teleconsultations or messaging features. Users can connect with smoking cessation counselors, therapists, or access a helpline for immediate assistance. Integrating expert support within the app ensures that users have access to professional guidance during challenging times.

## 2.3 Data Flow

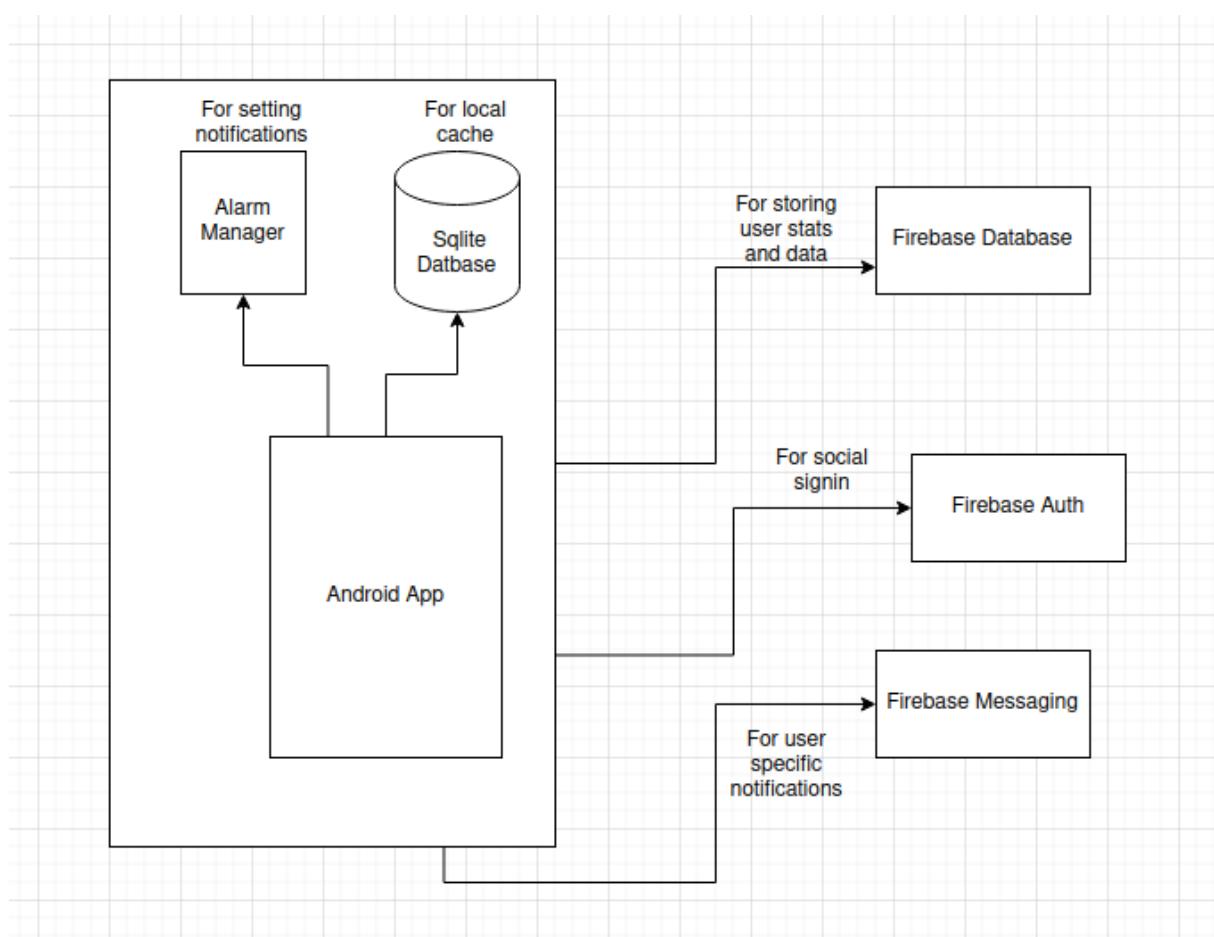


Fig 2: Low Level overview on how app works

## 2.4 Frameworks

We are planning to utilize Firebase for notifications and for storing persistent user data. For the web version of the app, we will be using React to develop the portfolio website.

### 3. Aesthetics

A balance between aesthetics and functionality is important for mobile app design. We are still experimenting with the placement of our critical functionality throughout the app. For the early prototype of the project, we will prioritize functionality over design, with the design iterations growing over time.

#### 2.1 Primary Color Palettes

Primary	On Primary	Primary Container	On Primary Container
Secondary	On Secondary	Secondary Container	On Secondary Container
Tertiary	On Tertiary	Tertiary Container	On Tertiary Container
Error	On Error	Error Container	On Error Container
Background	On Background	Surface	On Surface
Outline		Surface-Variant	On Surface-Variant

#### 2.2 Fonts

We will be using the variant of free google fonts "Poppins"

Thin 100

Quit Smoking

---

Thin 100 Italic

*Quit Smoking*

---

ExtraLight 200

Quit Smoking

---

ExtraLight 200 Italic

*Quit Smoking*

---

Light 300

Quit Smoking

---

Light 300 Italic

*Quit Smoking*

---

Regular 400

Quit Smoking

---

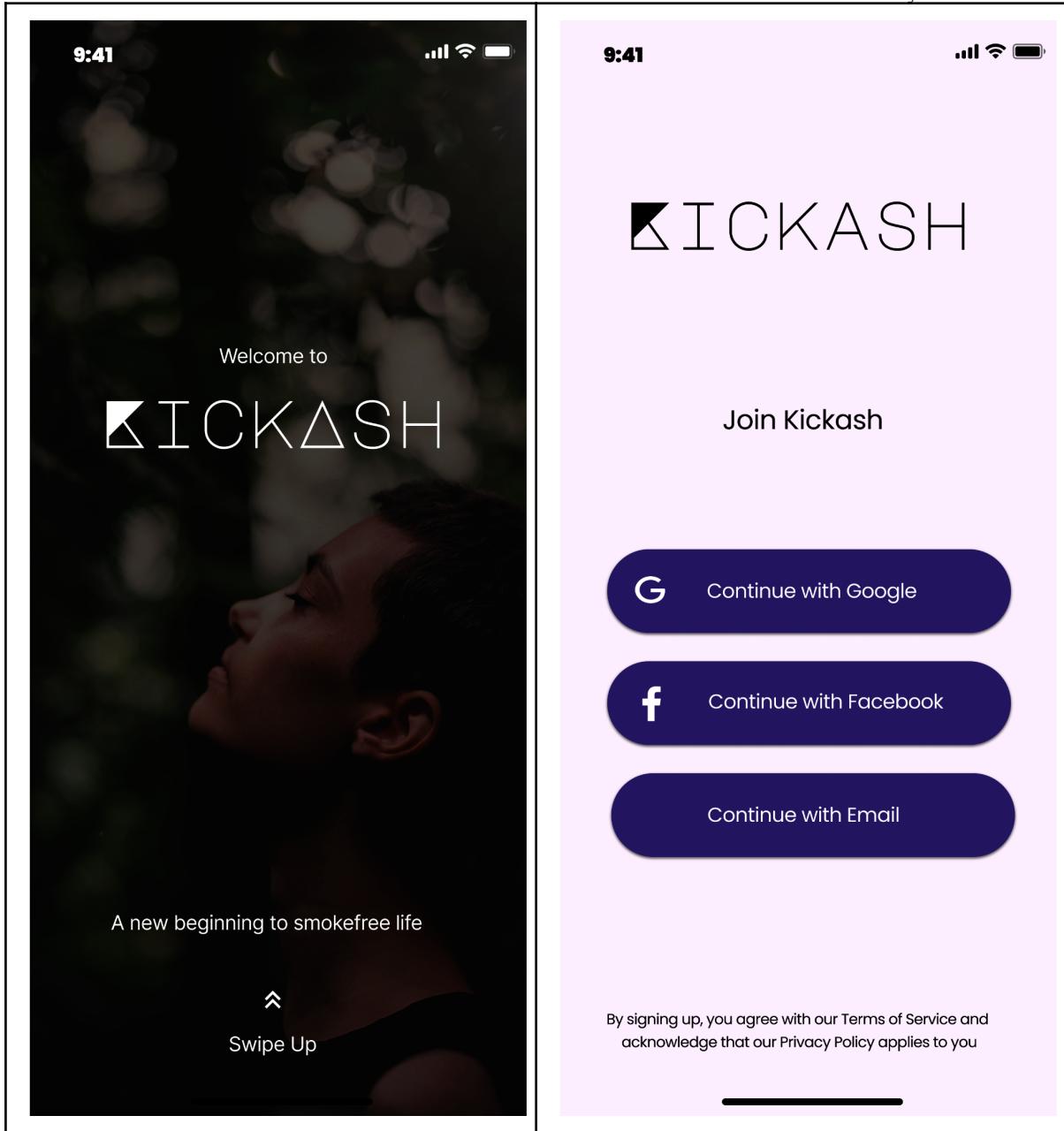
## 3. Design & Wireframes

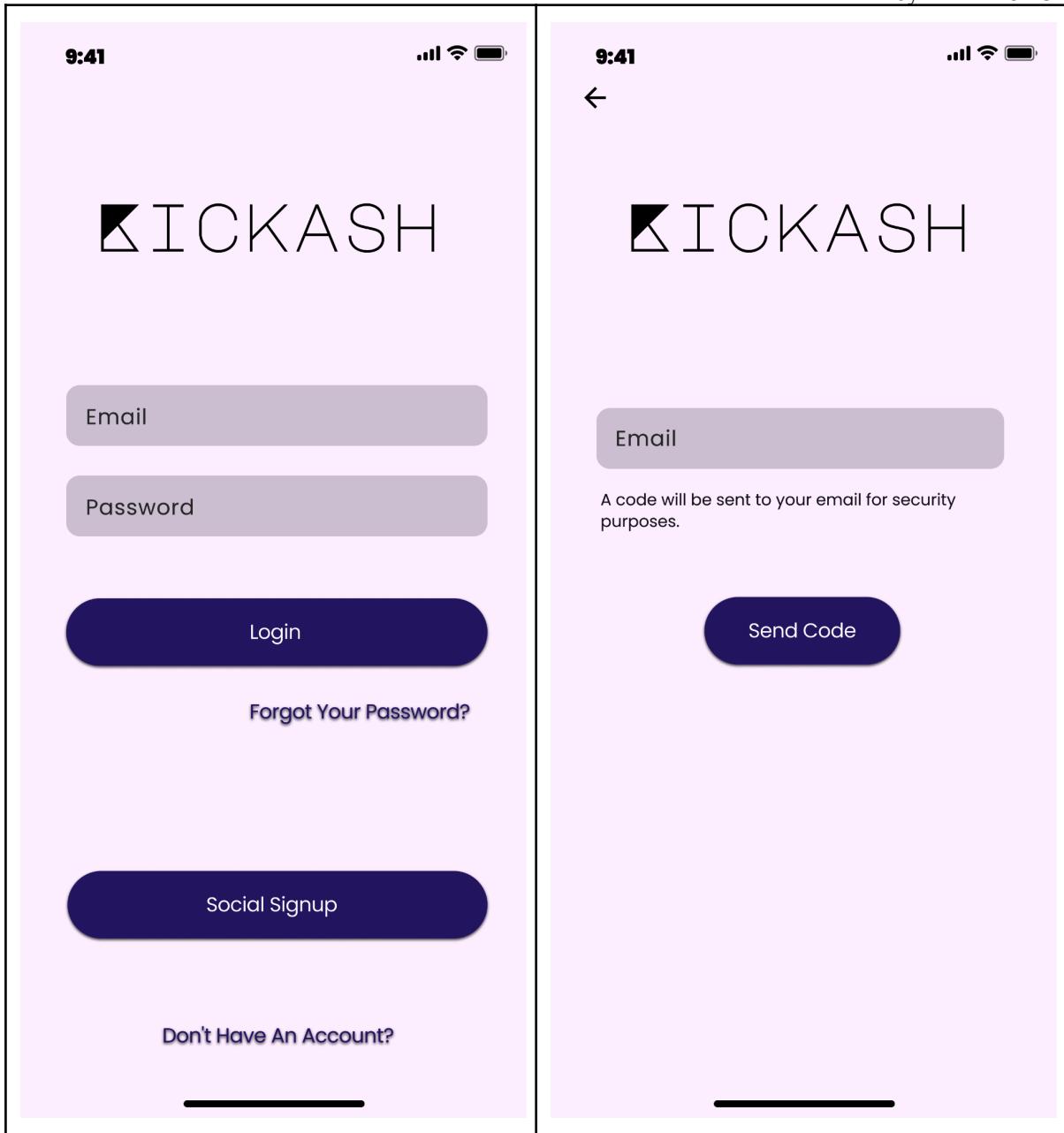
### 3.1 UI/UX Prototype

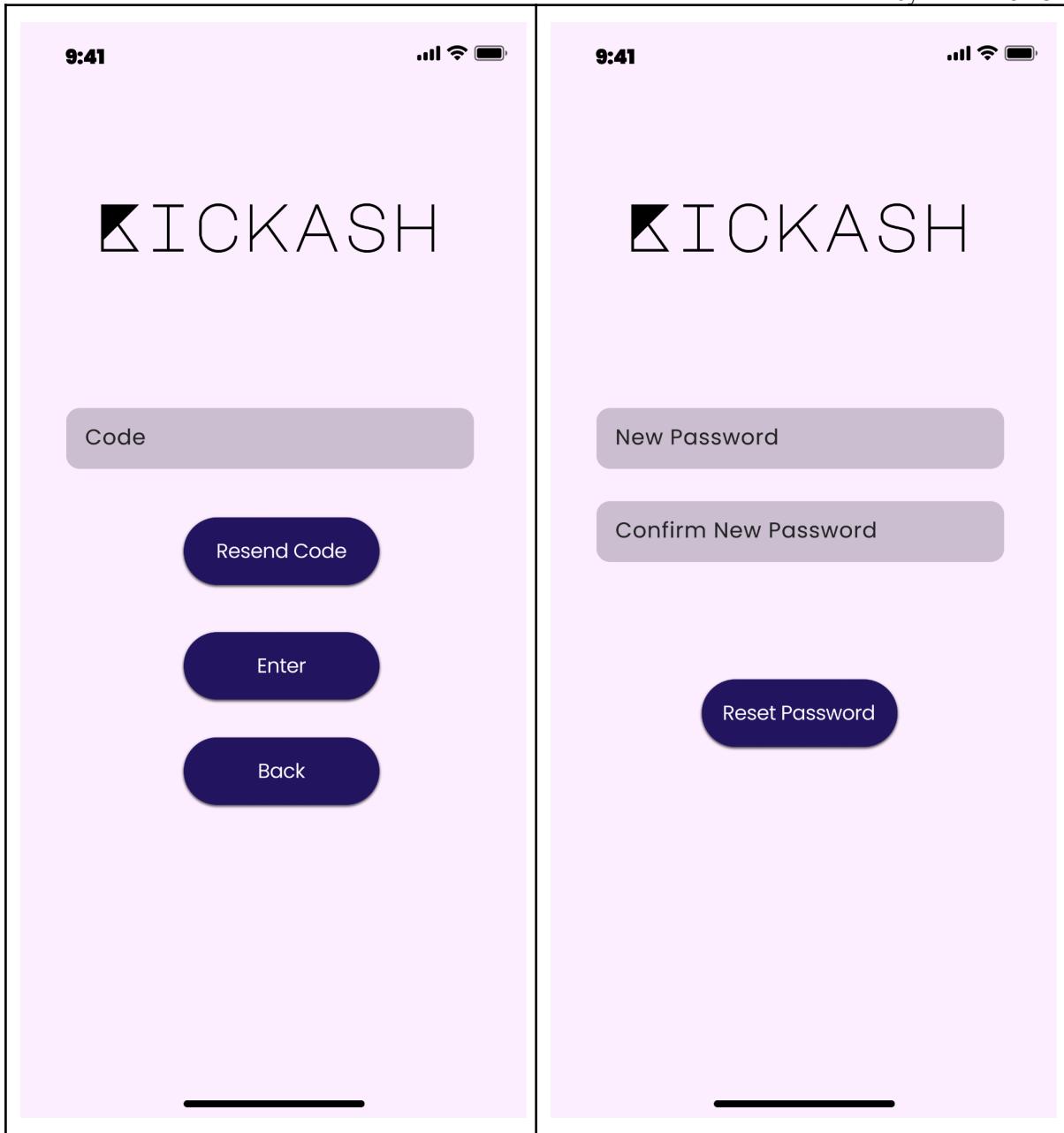
<https://www.figma.com/file/1xAfiH89RaZ1I9hNO9L9yN/KickAsh?type=design&node-id=18-129&t=fp2xmBkC6vqAdLUc-0>

The UI screens that we have developed in this release are

- Registration/Login Screen
- Onboarding Screen
- Social feature Screen
- Motivational support Screen
- User Profile
- Progress Tracking Screen
- Educational Resources (Articles)







9:41



# KICKASH

Your password has been  
successfully reset.

Back to Login



## ***Kudos to you!***

*on taking the big  
step towards a  
healthier living*

Please help us understand you better  
by answering a few questions

Let's go!

9:41



When did you start  
smoking?

It's been more than 5 years

It's been a year or two

Less than an year

Next

9:41



How many cigarettes  
do you consume daily

Less than 10

Less than 20

20 or more

Next

9:41



What's your gender ?

Male

Female

Other

Next

9:41



How do you feel after  
smoking?

Stress free

Guilty

Happy

Next

9:41



What triggers you to  
smoke?

Stress

Anxiety

Craving

Next

9:41



How stressful can your day  
be? (in percentage)

25

Next

9:41



How stressful can your day  
be? (in percentage)



Next

9:41



What prompted your  
decision to quit smoking?

- Health concerns
- Family and loved ones
- Financial savings
- Social Acceptance
- Improve physical fitness

Next

9:41

What are your hobbies?  
(You can select more than one)

Photography

Painting or drawing

Playing a musical instrument

Cooking or baking

Crafting

Hiking or nature walks

Playing sports

Dancing

Playing video games

Next

9:41

←



**WOHOOO!!!**

We know you better now!  
Thank you for your time

*You are all set to start your smoke free journey with*

**KishAsh**

[Click Here](#)

9:41

Good Morning Subash



Money Saved  
**\$43.70**

Annual Saving  
**\$1,825.00**

That's exactly  
**200** cigarette not smoked  
**10** packs not bought

That's exactly  
**85** cigarette avoided  
**10h** of life won back

Had a relapse ?

**I smoked Today**

9:41

← Community

**Mark**  
Hi, Today's my first week without smoking :)  
3m

**Hi, Mark thank you for being here,**  
also first time here  
3m

**Lady Gaga**  
Since November 13, 2020 at 8:30  
342 days smoke free  
6840 cigarettes down,  
\$3,420 and 28 days saved  
3m

**Rossy Love**  
Good job! Keep it up! I've been here for quite a long time and I also started with you guys for a while now, just keep me updated alright. Just do it man.  
3m

**Send Reply** >

**9:41**

←



## YOUR BALANCE

**3150 points**

**Redeem coupons**

**25% off on H&M**

**H&M**

**COUPON UNLOCKED**      **Redeem for 1500**

**40% off on Tim Hortons**

**Tim Hortons**

**COUPON UNLOCKED**      **Redeem for 2999**

**10% off on Credit Card Bills**

**Credit Card Bills**

**COUPON UNLOCKED**      **Redeem for 9999**

**5% off on APPLE PRODUCTS**

**APPLE PRODUCTS**

**COUPON UNLOCKED**      **Redeem for 15999**

**Home**      **Reward**      **Social**      **Info**

**9:41**

←

## Progress

0.5%

**Day 1**

**⌚**

4 : 23

Hrs      Min

time without smoke

**\$**

23 \$

Money saved

**❤**

72 b/min

Heart Rate

**🚫**

23

cigarettes smoked

**Home**      **Reward**      **Social**      **Info**

**History**

From Date

To Date

Cigarettes Smoked

**Search** **Graph**

11-jun-23	2Fags
10-jun-23	5Fags
9-jun-23	4Fags

**Home** **Reward** **Social** **Info**

**Articles**

- The Health Benefits of Quitting Smoking: Reclaiming a Smoke-Free Life**  
By Admin  
Posted: 2 days ago
- From Smoke to Fresh Air: How Quitting Smoking Transforms Your Lung Health**  
By Admin  
Posted: 2 days ago
- Smoke-Free Homes: Creating a Healthy Environment for Your Family**  
By Admin  
Posted: 2 days ago
- The Financial Benefits of Quitting Smoking: Saving Money While Saving Your Health**  
By Admin  
Posted: 2 days ago
- Breaking Free: Overcoming Withdrawal Symptoms When Quitting Smoking**  
By Admin  
Posted: 2 days ago

**Home** **Reward** **Social** **Info**

9:41



The Health Benefits of Quitting Smoking: Reclaiming a Smoke-Free Life

By Admin

Posted: 2 days ago

2 Min Read

Quitting smoking is one of the best decisions you can make for your health. The health benefits of quitting smoking are numerous and can have a significant impact on your overall well-being. Here are some of the key benefits:

1. Reduced risk of diseases: Smoking is a leading cause of various diseases, including lung cancer, heart disease, stroke, and respiratory conditions like chronic bronchitis and emphysema. By quitting smoking, you significantly reduce your risk of developing these serious illnesses.
2. Improved cardiovascular health: Smoking damages your cardiovascular system by narrowing the blood vessels, increasing blood pressure, and raising the risk of blood clots. When you quit smoking, your heart and blood vessels begin to heal, reducing the risk of heart attacks, strokes, and other cardiovascular problems.
3. Enhanced lung function: Smoking harms your

9:41

←

## Profile



Member Since  
2020 - 02 - 03

[Edit](#)

User Name  
@ginac

Display Name  
Gina Harolds

Gender  
Female

Date of Birth  
1998 - 02 - 03

**Smoker Profile**

Smoker Age  
21

Numbers of cigarettes per day

Estimated cost per pack

9:41

# Yes to life

Join a community motivating thousands of people towards their efforts to quit smoking.

Join Now!!

Home Reward Social Info

9:41

## Let's Motivate

Keep up the streak and motivate others to quit smoking.



Srk  
150+ days

---



Salman  
60 days

---



Bob  
10 days

---



Ajaya  
150+ days

Share Story

Home Reward Social Info

9:41



## Share Your Stories Here.

Share story about the day you found your reason to quit smoking.



my son made me

.....



I dealt with my cigarette cravings by playing my favourite sport



Home



Reward



Social



Info

## 4. Assets Index

Name	Type	Source
Font Awesome Icon Packs	icons	<a href="https://fontawesome.com/v4/icons/">https://fontawesome.com/v4/icons/</a>
N/A	sound	
Illustrations	SMG files	<a href="https://undraw.co/illustrations">https://undraw.co/illustrations</a>
Confetti Image	Image	<a href="#">Flaticon</a>
Material Icon Packs	Icons	<a href="#">Packs</a>

## 5. Version History & Changelog

### 5.1 Version 1

- Initial Draft for the project

### 5.2 Version 2

- Create UI based on the proposed wireframe
- Fixed wireframe in some edge case
- Started android project with wireframes

### 5.3 ChangeLog

- Initial UI for the projects

### 5.4 Version Control

All the code and resources used throughout this project will be shared on Github, and team members are notified to create a new branch for every new feature they will be working on. You can find the project at:

<https://github.com/subasharyalgeorgian/ByteForce>

## 6. References

1. S. Department of Health and Human Services. [Smoking Cessation. A Report of the Surgeon General](#). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2020 [accessed 2023 June 3].
2. Babb S, Malarcher A, Schauer G, Asman K, Jamal A. [Quitting Smoking Among Adults—United States, 2000–2015](#). Morbidity and Mortality Weekly Report 2017 [accessed 2023 June 3].
3. Creamer MR, Wang TW, Babb S, et al. [Tobacco Product Use and Cessation Indicators Among Adults — United States, 2018](#). MMWR Morb Mortal Wkly Rep [accessed 2023 June 3].
4. Cromwell J, Bartosch WJ, Fiore MC, et al. [Cost-effectiveness of the clinical practice recommendations in the AHCPR guideline for smoking cessation](#). [accessed 2023 June 3].