

Mobile Application Design Document KickAsh

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Table of Contents

Table of Contents	1
1. App Overview	2
1.1 Introduction	2
1.2 Problem Domain	3
1.3 Target Audience	4
1.4 Supported Platform	4
2. App Functionalities	5
2.1 Main Functionalities	5
2.2 Additional Functionalities	6
2.3 Data Flow	7
2.4 Frameworks	8
3. Aesthetics	9
2.1 Primary Color Palettes	9
2.2 Fonts	9
3. Design and Wireframes	10
3.1 UI/UX Prototype	
4. App Screenshots	28
4.1 Login	28
4.2 Dashboard	28
4.3 Questionnaire	29
4.4 Articles	29

5. Portfolio Site Wireframes	30
5.1 Home Page	30
5.2 About Page	30
5.3 Features Page	31
5.4 Services Page	31
5.5 Contact Page	32
6. Portfolio Site Screenshots	33
6.1 Home page	33
6.2 About Page	33
6.3 Features Page	34
6.4 Services Page	34
6.5 Contact Page	35
7. Assets Index	35
8. Version History & Changelog	36
8.1 Version 1	36
8.2 Version 2	36
8.3 Version 3	36
8.4 Version 4	36
8.5 Version 5	36
8.6 Version Control	36
9. References	37

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

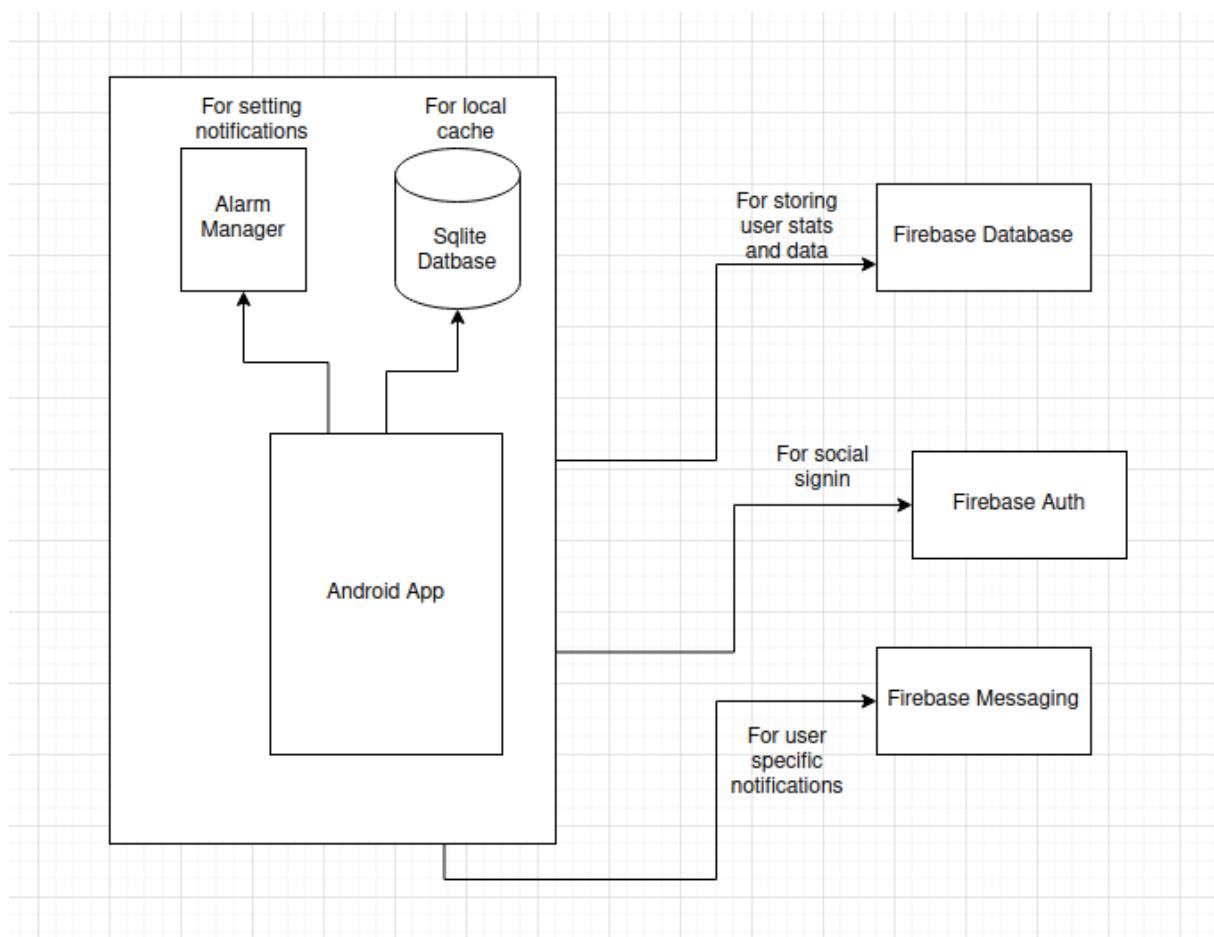


Fig 2: Low Level overview on how app works

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 Express, TypeScript, and EJS to develop the portfolio website. We'll also use REST APIs in some parts of the application for data management.

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/1xAfiH89RaZ1l9hNO9L9yN/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 (Questionnaires)
- Social feature Screen
- Motivational support Screen
- User Profile
- Progress Tracking Screen
- Educational Resources (Articles)

9:41

Welcome to

KICKASH

A new beginning to smokefree life

Swipe Up

9:41

KICKASH

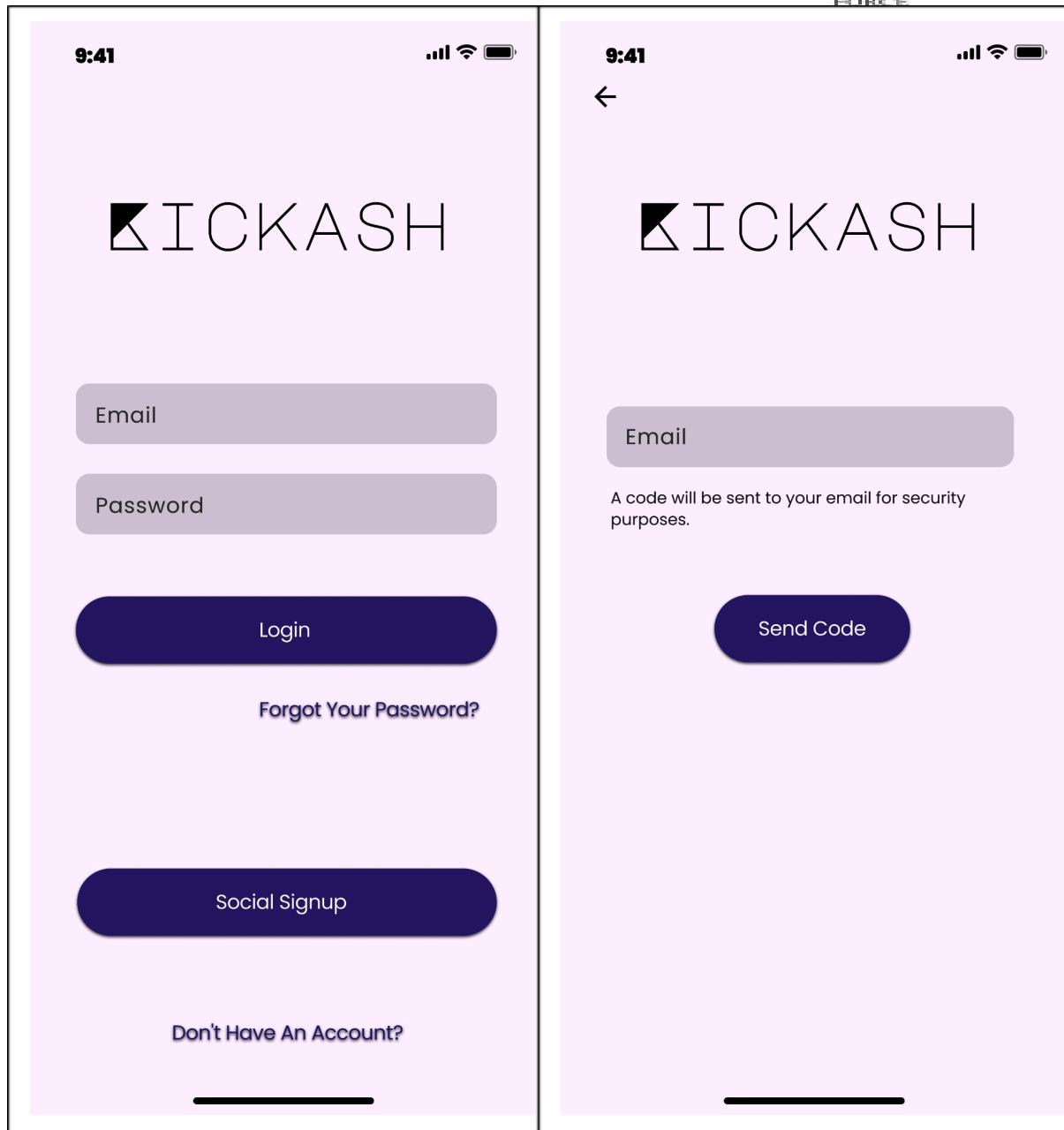
Join Kickash

G Continue with Google

f Continue with Facebook

Continue with Email

By signing up, you agree with our Terms of Service and acknowledge that our Privacy Policy applies to you



9:41



KICKASH

Code

Resend Code

Enter

Back

9:41



KICKASH

New Password

Confirm New Password

Reset Password

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)



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, Todays 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
COUPON UNLOCKED Redeem for 1500

40% off on Tim Hortons
COUPON UNLOCKED Redeem for 2999

10% off on Credit Card Bills
COUPON UNLOCKED Redeem for 9999

5% off on APPLE PRODUCTS
COUPON UNLOCKED Redeem for 15999

Home Reward Social Info

9:41

← Progress

0.5%

Day 1

Time without smoke
4 : 23
Hrs Min

Money saved
23 \$

Heart Rate
72 b/min

cigarettes smoked
23

Home Reward Social Info

9:41

History

From Date: 06/1/2023 

To Date: 06/11/2023 

Cigarettes Smoked ▾

Search Graph

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

Home Reward Social Info

9:41

←

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 2 Min Read

Posted: 2 days ago

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



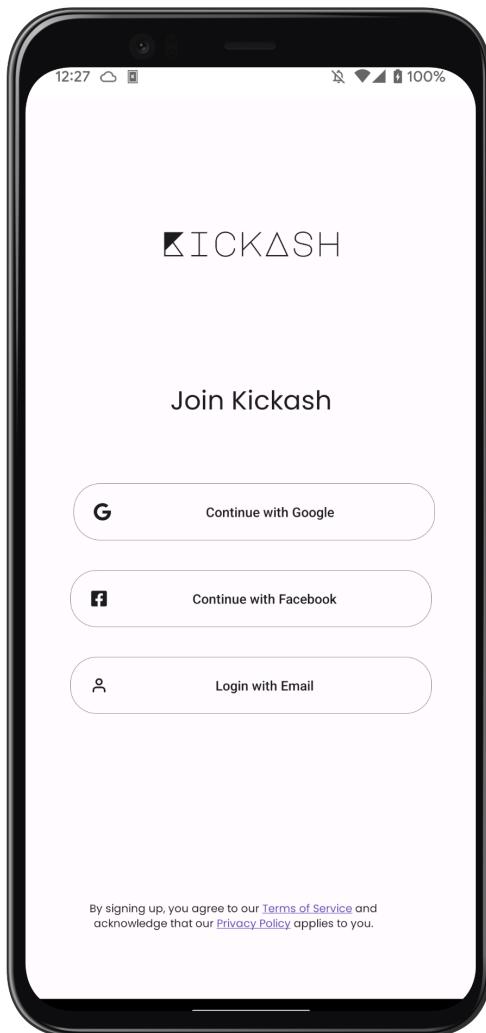
Social



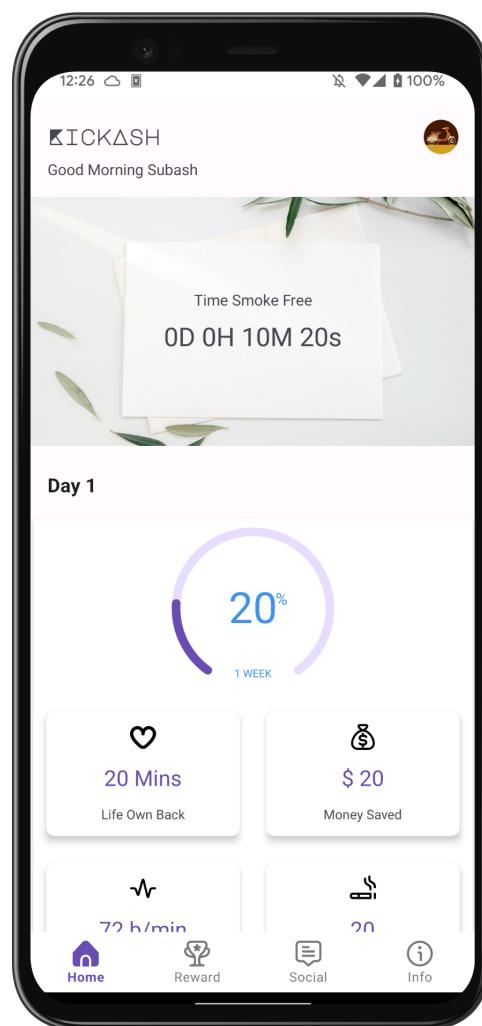
Info

4. Application Screenshots

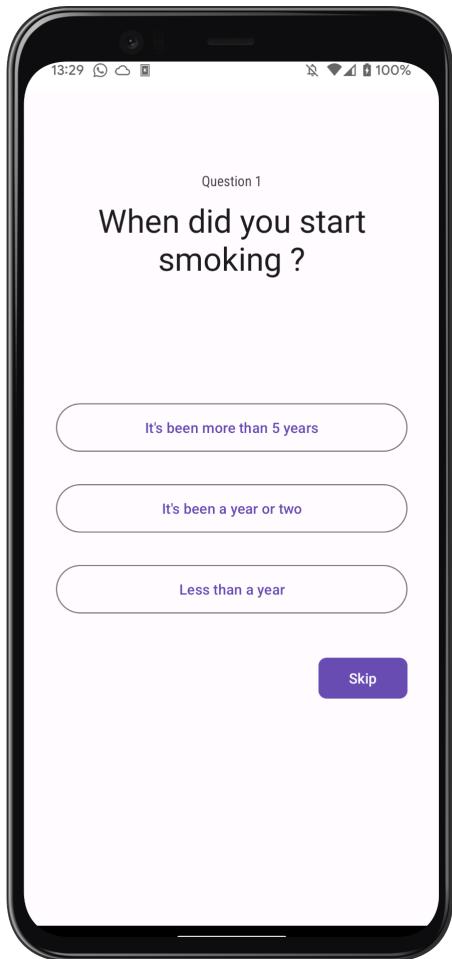
4.1. Login



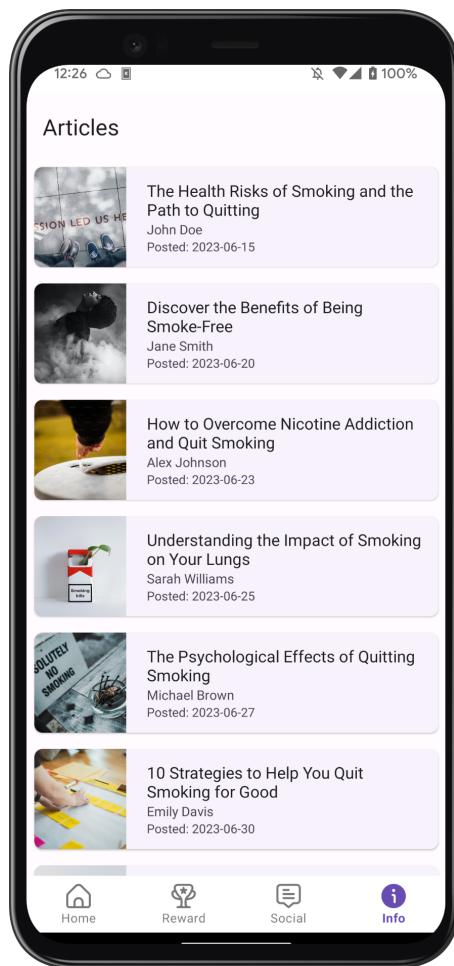
4.2. Dashboard



4.3. Questionnaire

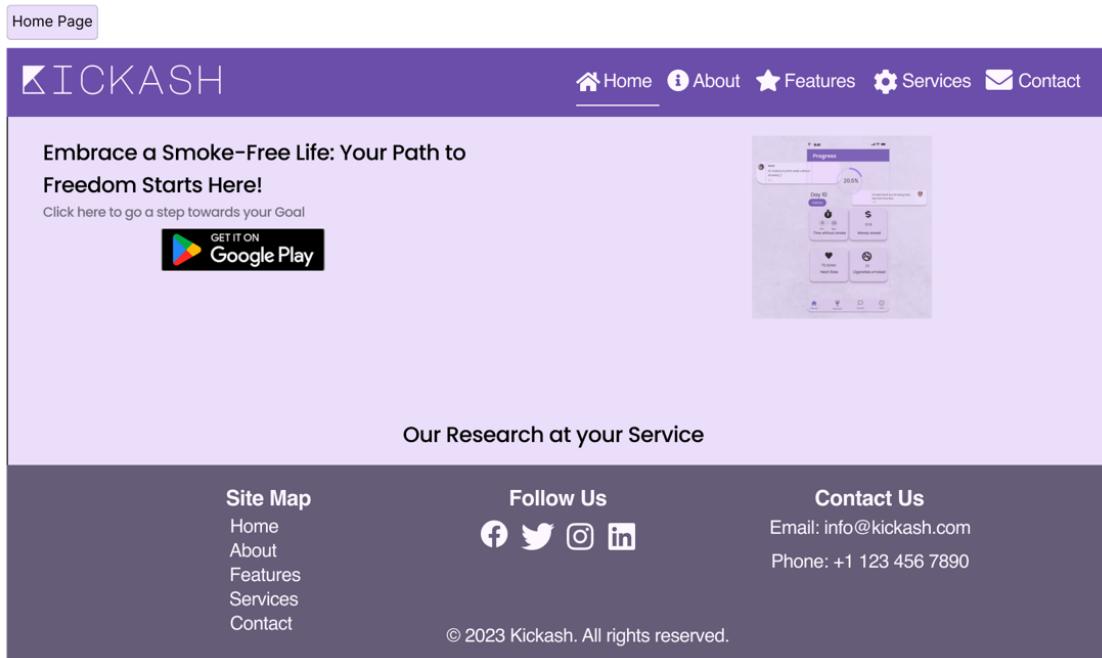


4.4. Articles

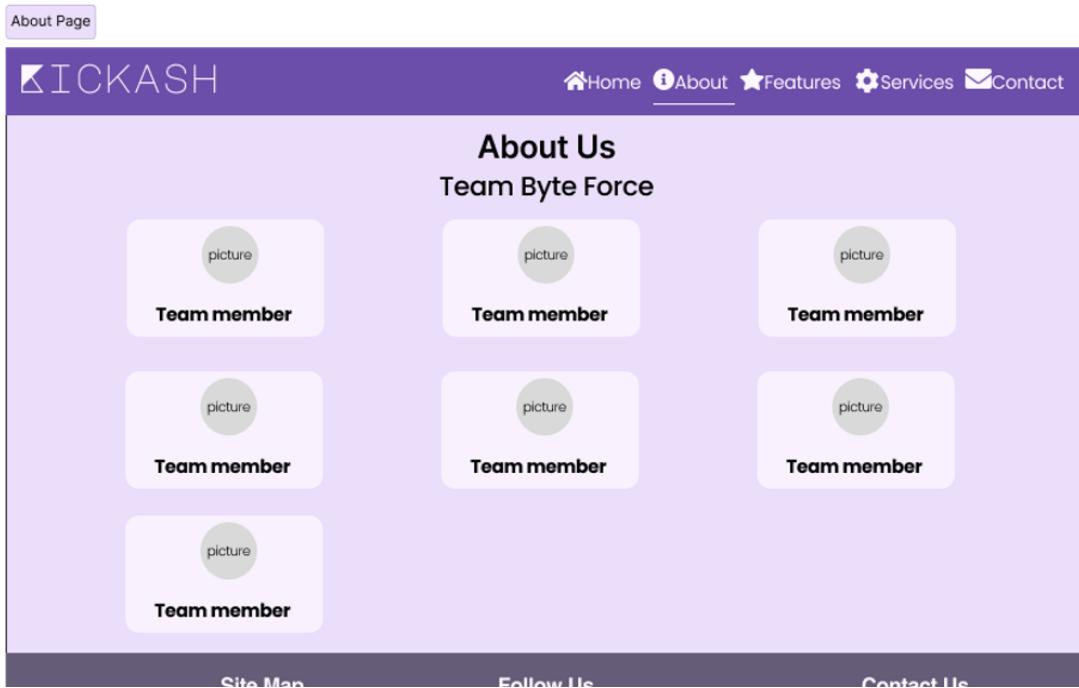


5. Portfolio Site Wireframe

5.1. Home Page



5.2. About Page



5.3. Features Page

Features Page

KICKASH

Home About Features Services Contact

Feature 1

About the feature

Feature 2

About the feature

5.4. Services Page

Services Page

KICKASH

Home About Features Services Contact

Our Services

Service 1

About Service

Take a look at our app here

Service 2

About Service

Service 2

About Service

Contact us to get started

5.5. Contact Page

Contact Page

The screenshot shows the 'Contact Us' section of the KICKASH website. At the top, there's a purple header bar with the 'KICKASH' logo and navigation links for Home, About, Features, Services, and Contact. Below the header, the main content area has a light blue background. It features a heading 'Contact Us' and a sub-instruction 'Find us in one of the following social media platforms:' followed by icons for Facebook, Twitter, Instagram, and LinkedIn. A note says 'Got a question for us? Leave us your contact information and inquiry here:' Below this, there are required fields: 'Email *' (with placeholder 'Email'), 'Name' (with placeholder 'Name'), and 'Inquiry *' (with placeholder 'Enter your inquiry here...'). A 'Submit' button is located at the bottom left of the form area.

KICKASH

Home About Features Services Contact

Contact Us

Find us in one of the following social media platforms:

Got a question for us? Leave us your contact information and inquiry here:

* = required

Email *

Name

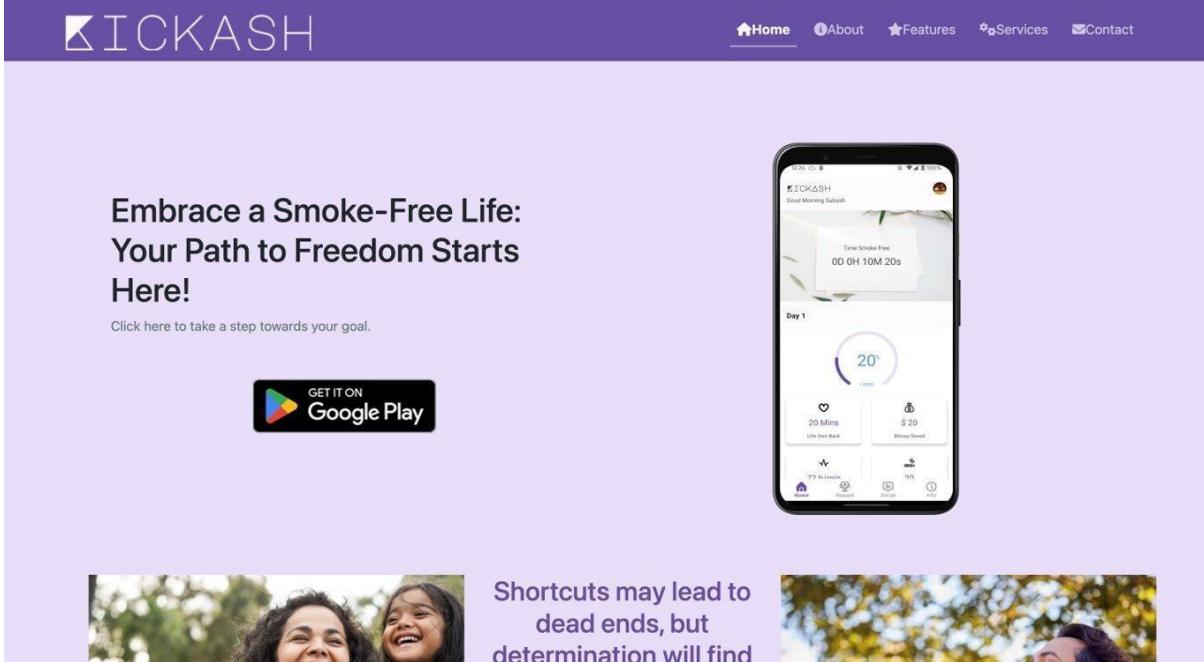
Inquiry *

Enter your inquiry here...

Submit

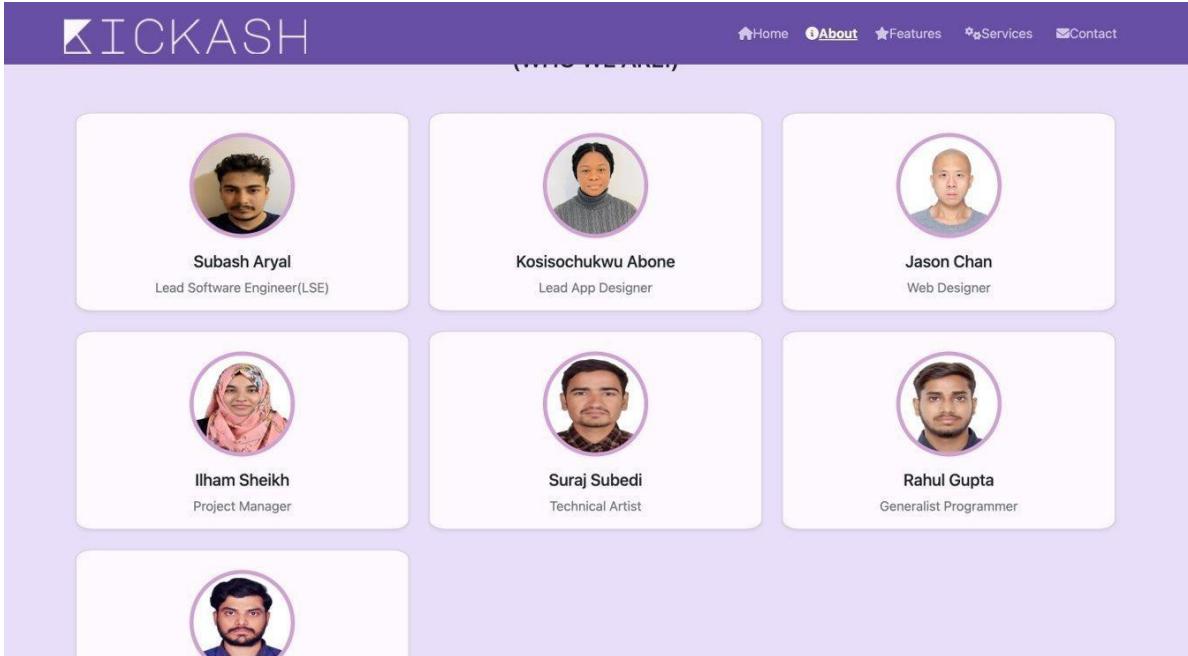
6. Portfolio Site Screenshots

6.1. Home Page



The screenshot shows the KICKASH home page. At the top, there's a purple header bar with the KICKASH logo on the left and navigation links for Home, About, Features, Services, and Contact on the right. Below the header, a large central text area reads: "Embrace a Smoke-Free Life: Your Path to Freedom Starts Here!". Underneath this text is a button that says "Click here to take a step towards your goal.". To the right of the text area is a smartphone displaying the KICKASH mobile application interface. The app screen shows a timer at "Time Smoke Free 0D OH 10M 20s", a progress bar for "Day 1" at 20%, and various stats like "20 Mins Life Back" and "\$ 20 Money Saved". Below the phone is a section with two images: one of two smiling people and another of a person smiling outdoors. A quote overlay on the right side of this section reads: "Shortcuts may lead to dead ends, but determination will find".

6.2. About Page



The screenshot shows the KICKASH about page. It features a purple header bar with the KICKASH logo and navigation links for Home, About, Features, Services, and Contact. The main content area displays a grid of seven team member profiles, each consisting of a circular profile picture, the member's name, and their job title. The profiles are arranged in three rows: the first row has three members (Subash Aryal, Kosisochukwu Abone, Jason Chan); the second row has three members (Ilham Sheikh, Suraj Subedi, Rahul Gupta); and the third row has one member (partially visible). Each profile card also includes a small "View Profile" link below the member's name.

6.3. Features Page

The screenshot shows the 'Features' section of the KickAsh website. At the top, there's a purple navigation bar with the KickAsh logo and links for Home, About, Features (which is highlighted with a star icon), Services, and Contact. Below the navigation, there's a large, stylized illustration of a person running upwards through clouds, with two arrows pointing upwards above them. A callout box on the left says 'Track your progress' and describes how the app helps users set goals and track their progress. To the right of the illustration is a smartphone displaying the KickAsh mobile app's dashboard, which shows a timer for 'Time Smoke Free' (00:00:10M 20s), a progress bar for 'Day 1' (20%), and various stats like '20 Mins Life Back' and '\$ 20 Money Saved'. Below the main illustration, there's another smartphone showing a question screen with 'Question 1: When did you start smoking?'. A hand is shown interacting with the phone. A text overlay at the bottom right says 'An app that is curated just for you'.

6.4. Services Page

The screenshot shows the 'Services' section of the KickAsh website. At the top, there's a purple navigation bar with the KickAsh logo and links for Home, About, Features, Services (which is highlighted with a star icon), and Contact. On the left, there's a smartphone displaying the KickAsh mobile app's login screen with options to 'Continue with Google', 'Continue with Facebook', or 'Sign up instead'. On the right, there's a section titled 'Mobile Application Development' with a brief description of the team's experience in building native apps for Android and iOS, as well as cross-platform apps using React Native. A button labeled 'Take a look at our app here' is present. At the bottom, there's a section titled 'Website Design' with a brief description of the team's ability to help design websites according to user needs. Two smaller screenshots of the KickAsh website and mobile app are shown side-by-side.

6.5. Contact Page

Contact Us

Find us on one of the following social media platforms:

Got a question for us? Leave us your contact information and inquiry here:

* = required

Email *

Name

Inquiry *

Submit

7. Assets Index

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

8. Version History & Changelog

8.1 Version 1

- Initial Draft for the project

8.2 Version 2

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

8.3 Version 3

- Connected Logic to the UI developed
- Added Mock Data and connected to the UI
- Created the Social screen functionality

8.4 Version 4

- Created APIs for the Register, Login, Profile
- Fixed Bugs from previous versions
- Completed the Logic for the goal setting and smoking history, and connected to the UI

8.5 Version 5

- Final Bug Fixes
- Connected Logic and integrated social messaging API to the UI
- Functional Testing

8.6 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>

9. 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].