

Title: HelloChef Development Report

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1. Introduction

1.1 Problem Statement & Motivation

Eating is fundamental to human life; to survive all individuals must consume a certain amount of calories daily. It is a direct result of this that cooking as a specialty is prominent in everyday life. Every meal ingested required at some point the work of someone to make it. This truth makes it all the more surprising that a recent survey found that 56% of Americans struggle with even the most trivial recipes [5]. The simple fact remains that a sizeable group of individuals never were given the opportunity to learn how to work in a home kitchen. The result of this is the necessity to resort to alternatives to cooking such as microwaveable meals and takeout.

It is this group of people that *HelloChef* is intended to support. Starting at the very basics of cooking and food safety, *HelloChef* will attempt to provide a rounded curriculum to give users the confidence to finally begin exploring home cooking on their own.

1.2 Background

The inability to prepare well-balanced meals is a more widespread issue than one might expect. A survey conducted by *OnePoll* [7] revealed that 30% of 2,000 respondents felt embarrassed by their cooking skills, while 36% actively avoided cooking for others. This highlights a significant demand for cooking tutorials and among those seeking to improve their skills, 61% reported watching free online tutorials.

The free online cooking space is fairly large, *YouTube* [1] predominantly makes up a large portion of this space with seemingly endless cooking content. Similar sites like *TikTok* [4] and *Instagram* [3] also contain a large repository of free online cooking tutorials and are intended to be viewed on mobile. However, one major flaw with these apps is that they were not designed with the sole intention of teaching home cooking. Because of this users may struggle to piece together a proper basis of the fundamentals, especially for individuals that simply don't know anything about cooking. In fact, in the current space, there exist very few examples of mobile apps that provide this foundation for the basics of learning to cook. Without this, it is possible many individuals simply left behind, unable to begin their journey into home cooking. *HelloChef* plans to remedy this by providing one of the first introductions to cooking and food safety wrapped up in a convenient package on mobile.

1.3 Learning Outcomes

Hello Chef's goal is ultimately to prepare its users well enough to master their skills in the kitchen and embrace full autonomous learning in the kitchen. The key learning outcomes that were in mind when designing the application were;

- Learn how to read and follow recipes step by step
- Understand the different cooking techniques; (chopping sauteing, etc.)
- Master kitchen safety (handling knives and other sharp tools, avoiding burns)
- Master food safety (proper food storage, avoiding cross contamination)
- Progress from beginner friendly meals to more complex dishes.
- Building confidence in the kitchen by following clear and interactive guidance.
- Learn how to cook without relying on takeout or pre-made meals

By this point, users should have an understanding of how to prepare common ingredients and should be well-versed in which tools they should use to accomplish these tasks. It should also be expected users will have a proper understanding of food safety as well as safe practices to use in the kitchen to prevent injury, illness, and destruction of property.

1.4 Source Material

HelloChef will include both practical and safety instructions per the *FDA's* [8] recommendation for safe handling and preparation of food. It will also include recipes sourced from popular sites such as *Pinterest* [2]. The curriculum of the instruction will be based on a derivate of the *Auguste Escoffier School of Culinary Arts* guide for beginners [6] as well as the opinions of other experts in the field.

2. App Design

2.1 Learning Objects

The learning experience in *HelloChef* will be enhanced through a variety of engaging learning objects, fostering an interactive and effective way to develop cooking skills. These include:

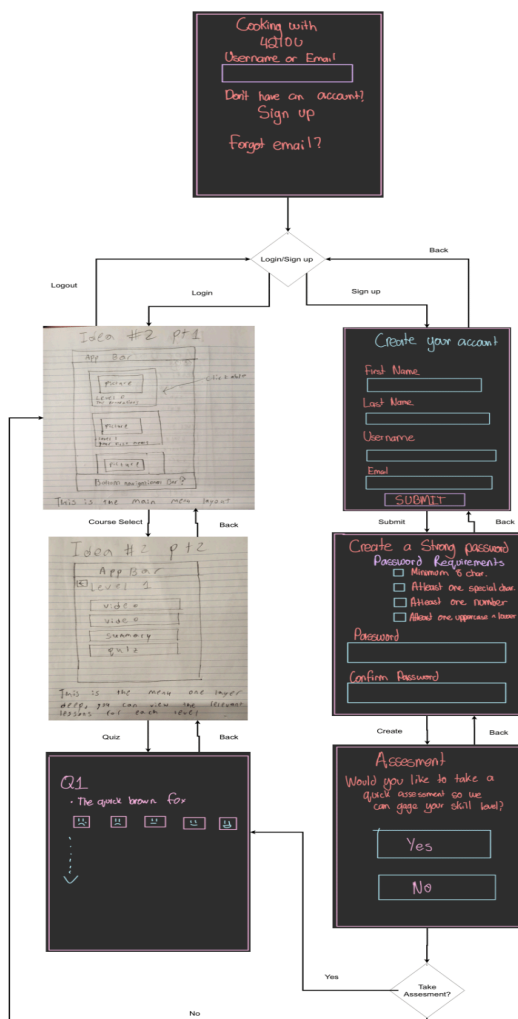
- Videos & Audio Recordings – Step by step guides and narrated instruction.
- Infographics & Images – Visual aids to show recipes, ingredient identification, and kitchen safety tips.
- Practice Scenarios – Real life cooking challenges to help users apply their skills in practical situations.
- Animations – Visuals to demonstrate techniques and driving engagement.
- Knowledge Testers – Interactive quizzes, fill-in-the-blank exercises, and matching to test what you've learned.

By integrating these elements together, *HelloChef* ensures a fun, engaging, and accessible environment where users can progress at their own pace.

2.2 Storyboard

Link: <https://imgur.com/VbauICH>

When you open *HelloChef*, you'll be greeted with the option to log in or sign up. Signing up is quick and simple. We just need a few basic details: first name, last name, username, and email. If you are logging in for the first time, you'll have the chance to take a skill quiz to assess your cooking level. But don't worry, it's completely optional! If you'd rather dive right in, you can skip the quiz and start fresh. From there, you'll gain access to a wide range of lessons covering essential kitchen skills. Plus, you can practice what you've learned with recipes categorized by skill level, making it easy to progress at your own pace.



2.3 Link to Figma Prototype

<https://www.figma.com/proto/0ChmDgHa75CLF1wjnU4W8H/Lab-5?node-id=34-317&t=0zrWGd1btdeg4tm-1>



3. Discussion

Throughout the design process of *HelloChef*, we faced quite a few challenges. With accessibility in mind, while designing the app, our main concern was maintaining a visually appealing and intuitive UI. One of the biggest hurdles was creating a colorblind-friendly design without compromising aesthetics. We experimented with various color palettes to find the perfect balance between readability, contrast, and brand identity while keeping accessibility in mind. Another challenge that was faced was making the app user-friendly for a wide range of ages. To achieve this, we opted for a clean, uncluttered UI instead of a more complex, feature-heavy interface. We prioritized intuitive navigation, using large, clear buttons with images and icon-based tabs to make interactions effortless for users of all skill levels. On the technical side, we carefully considered the best tech stack for the project. In the end, we chose Flutter over a web-based approach like React. Flutter's powerful animation framework makes it easier to create smooth, interactive elements which is quite crucial for an app featuring step-by-step cooking guides and real-time assistance. Additionally, we concluded that learning to cook is more convenient on a mobile device compared to on a laptop. Imagine you're on public

transportation after work on the go or in the kitchen and want to browse recipes or refine your cooking skills. A mobile app allows for a seamless, accessible experience that a mobile website struggles to provide.

4. Conclusion

At *HelloChef*, our goal is to create a simple, easy-to-use, and accessible mobile app that anyone can navigate even those with zero cooking experience. We want to take you from burning toast to making gourmet meals (or at least something edible!) all without setting off the fire alarm. Looking ahead, *HelloChef* has an exciting future. In the coming weeks, we'll be integrating AI to provide a virtual assistant chef who will guide you step by step on your cooking journey. You'll also be able to collect badges, earn XP, and climb the ranks as you level up your skills. Most importantly, accessibility remains our top priority. We're committed to designing an app that accommodates everyone, ensuring a seamless experience for all users while continuing to fine-tune the knowledge-building process. With *HelloChef*, spend less on take out, and eat healthier! Cooking will be easier, more fun, and within everyone's reach.

References

- [1] YouTube, "YouTube," 2005. [Online]. Available: <https://www.youtube.com/>. [Accessed: Feb. 13, 2025].
- [2] Pinterest, "Pinterest," 2009. [Online]. Available: <https://ca.pinterest.com/>. [Accessed: Feb. 13, 2025].
- [3] Instagram, "Instagram," 2010. [Online]. Available: <https://www.instagram.com/>. [Accessed: Feb. 13, 2025].
- [4] TikTok, "TikTok," 2016. [Online]. Available: <https://www.tiktok.com/en>. [Accessed: Feb. 13, 2025].
- [5] A. Caspero, "More than half of Americans struggle to cook basic recipes," *The Washington Times*, May 22, 2023. [Online]. Available: <https://www.washingtontimes.com/news/2023/may/22/wealth-geeks-more-half-americans-struggle-cook-bas/>. [Accessed: Feb. 13, 2025].
- [6] C. Garcia, "Learning how to cook: A guide for beginners," *Escoffier*, 2024. [Online]. Available: <https://www.escoffier.edu/blog/value-of-culinary-education/learning-how-to-cook-a-guide-for-beginners/>. [Accessed: Feb. 13, 2025].
- [7] M. Haaland, "These are the most common cooking fails Americans make in the kitchen," *Digitalhub US*, 2021. [Online]. Available: <https://swnsdigital.com/us/2019/10/these-are-the-most-common-cooking-fails-americans-make-in-the-kitchen/>. [Accessed: Feb. 13, 2025].
- [8] U.S. Food and Drug Administration, "Safe food handling," 2024. [Online]. Available: <https://www.fda.gov/food/buy-store-serve-safe-food/safe-food-handling>. [Accessed: Feb. 13, 2025].