

Muğla Sıtkı Koçman University

Department of Computer Engineering

Senior Design Project I

kebAPP

Analysis & Design Report

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kebAPP

1 Introduction

This report introduces the unique mobile idle game project titled 'KebAPP'. The game allows players to set up and manage their own kebab restaurants, offering a fun way to explore the richness and culture of Turkish cuisine. Starting as street vendors, players embark on a captivating journey from Konya through cities like Adana and Ankara, eventually reaching the upscale neighborhoods of Istanbul. Along the way, players discover various types of kebabs, learn about local flavors and ingredients, and experience Turkey's rich cultural mosaic as they develop their restaurants. 'KebAPP', developed using Unity, aims to provide an exceptional experience on mobile platforms.

2 Motivation

The primary motivation of this project is to entertain users through mobile games while introducing the richness and cultural diversity of Turkish cuisine. Kebab, one of Turkey's most beloved dishes and recognized worldwide, is often not fully understood in terms of its variety and history. 'KebAPP' aims to create an educational and entertaining platform by offering players the opportunity to explore these unique flavors in a gamified environment. Additionally, the absence of a game centered around Turkish cuisine in the idle game category makes this project innovative and eye-catching.

3 Similar Existing Applications

Among the similar existing applications, there are a variety of idle and cooking-themed games that typically feature general themes or various cuisines. For instance, games like:

Restaurant Story provide users with the experience of managing a restaurant and cooking. These games stand out with their variety of kitchen types and gameplay requiring quick reactions. Additionally idle games like:

Idle Miner Tycoon and **Adventure Capitalist** offer a gameplay experience based on simple interactions and focused on accumulating resources over time. These games usually do not offer educational content and are limited in cultural context.

In contrast, 'KebAPP' distinguishes itself as an idle game themed around Turkish cuisine and kebabs. The game focuses on various cities of Turkey and their cultural attributes, offering not just an entertaining gameplay experience but also providing players with educational information about Turkish cuisine and dishes. In terms of graphics and design, 'KebAPP' boasts an original design that reflects Turkish culture. These features set 'KebAPP' apart from its counterparts, making it an innovative option in the mobile gaming market."

KebAPP vs Other Games

Feature	KebAPP	Other Idle Games	Other Cooking Themed Games
Theme	Turkish cuisine and kebab	Various or general themes	Various cuisines or general cooking
Cultural Content	Cities and cultural features of Turkey	Limited or none	Usually limited or none
Game Mechanics	Idle game + restaurant management	Mainly just idle or simple interactions	Cooking, quick response or management focused
Graphics and Design	Original design reflecting Turkish culture	Various general designs	Various, usually standard kitchen environments
Educational Value	Information about Turkish cuisine and dishes	Not educational	Some offer recipes or cooking techniques

4 Proposed System

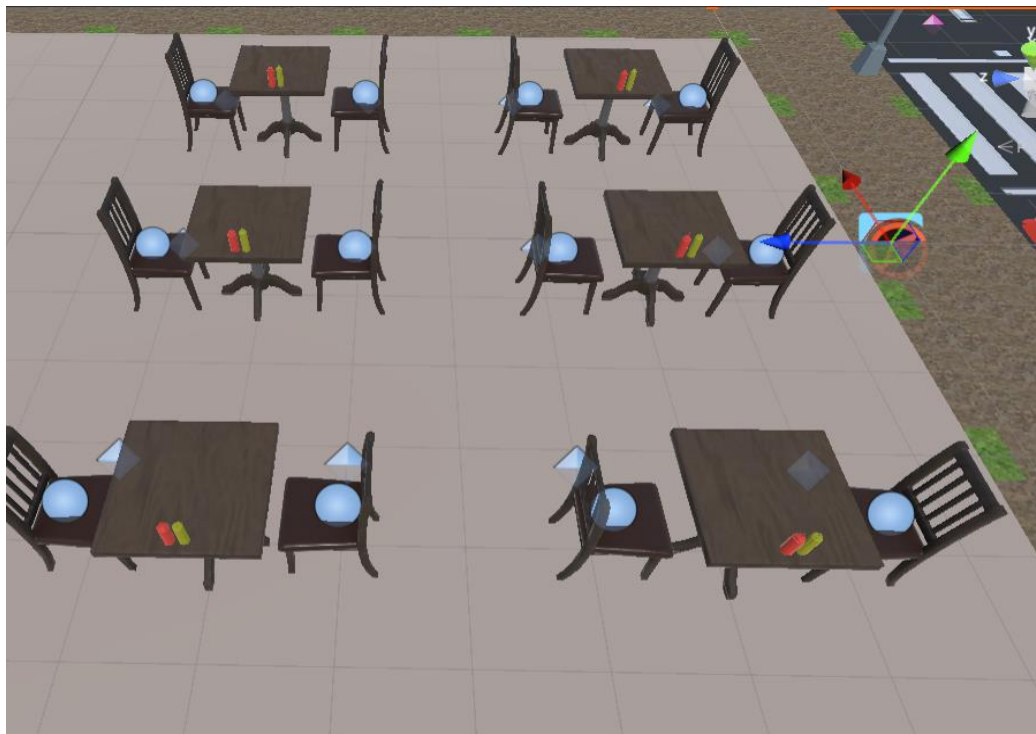
4.1 Overview



INITIAL LEVEL (LEVEL I (KONYA))



"The figure presented above displays the starting screen of the 'KebAPP' game, set in Konya, where players embark on their journey as street food vendors. In the kitchen area, the main dishes available for sale — Döner, Ayran, and Pilav — are featured. These can be unlocked with certain amounts of gold. Initially, players begin the game with a set amount of gold, which they will use to start selling döner. The earnings can then be invested not only in upgrading the döner but also in unlocking additional döner machines. After reaching a specific level of development, Pilav and Ayran can be introduced in a similar manner. These upgrades will result in increased revenue and production speed.



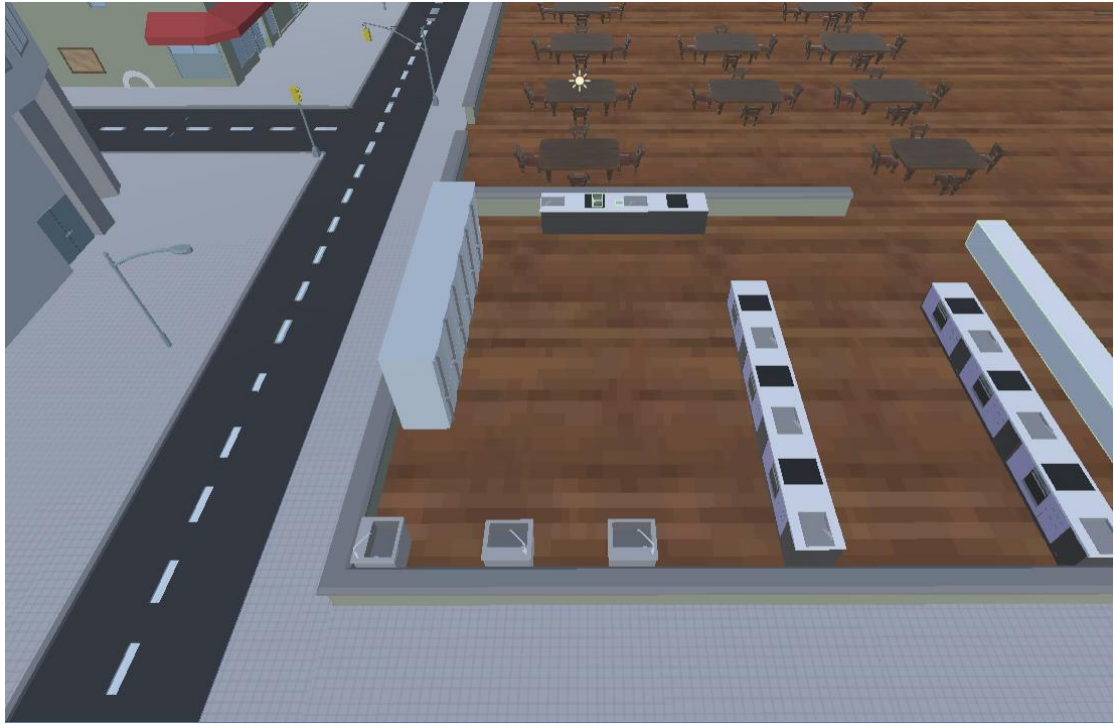
In the central area of the screen, there are tables and chairs designed for customers to sit, enjoy their meals, and then leave. These furnishings can also be upgraded to enhance the price received from the sold products. Upon completing all the upgrades and achieving the desired amount of money, players will earn the right to advance to the next level, unlocking new venues and opportunities."



NEXT LEVEL (LEVEL II (ADANA))

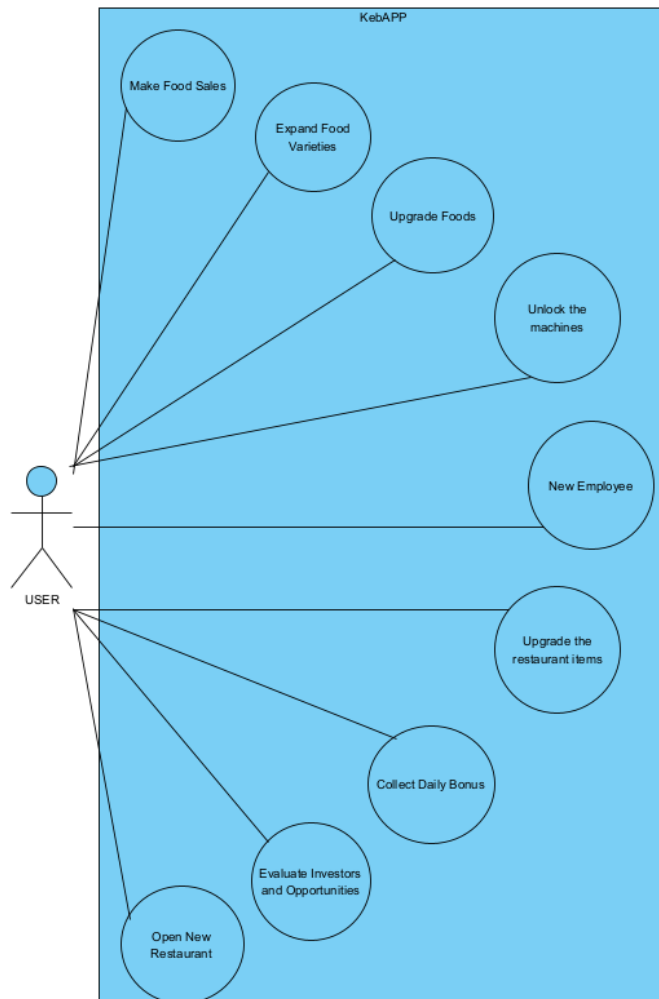


NEXT LEVEL (LEVEL III (ANKARA))



LAST LEVEL (LEVEL IV (ISTANBUL))

4.2 Functional Requirement



1) Make Food Sales

Description: Users engage in selling food items to customers to earn in-game currency. This is the primary revenue stream within the game.

2) Expand Food Varieties

Description: Users can unlock new food items to expand their menu, allowing for increased in-game earnings.

3) Upgrade Foods

Description: Users can enhance their food items to increase the sale price and reduce preparation time.

4) Unlock the Machines

Description: Users can unlock new machines and cooking apparatuses in the game, enabling them to prepare more food simultaneously or introduce new types of food.

5) Hire New Employee

Description: Users can hire new employees to serve customers faster and earn money more quickly.

6) Upgrade the Restaurant Items

Description: Users can refurbish the interior of their restaurant to increase revenue.

7) Collect Daily Bonus

Description: Users can collect daily bonuses, which may include in-game currency, rare ingredients, or boosters to accelerate their progress.

8) Evaluate Investors and Opportunities

Description: Users have the opportunity to evaluate offers from investors or special opportunities that could result in additional financing or other benefits for their restaurant.

9) Open New Restaurant

Description: Once users complete all upgrades and accumulate the necessary funds, they can expand their business by opening new restaurant locations in different areas, attracting more customers, and unlocking new challenges.

4.3 User Interface Design

1. when you click on the application



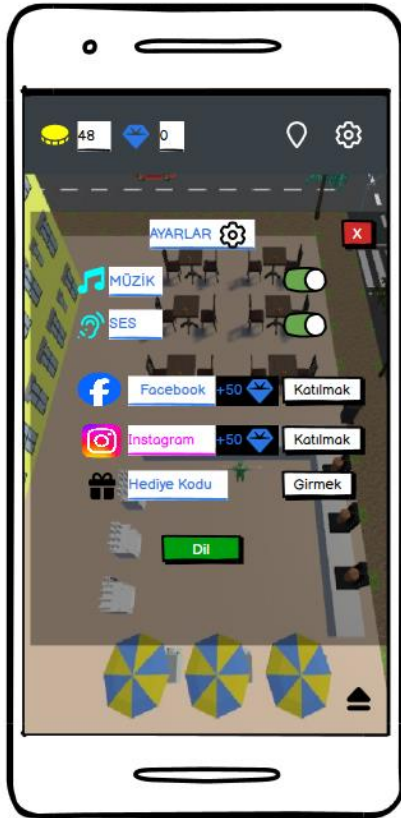
2. loading screen



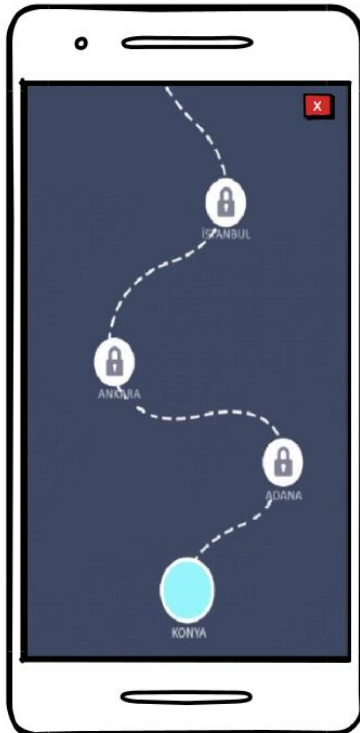
3. after loading screen we'll inside of the game



4. settings button



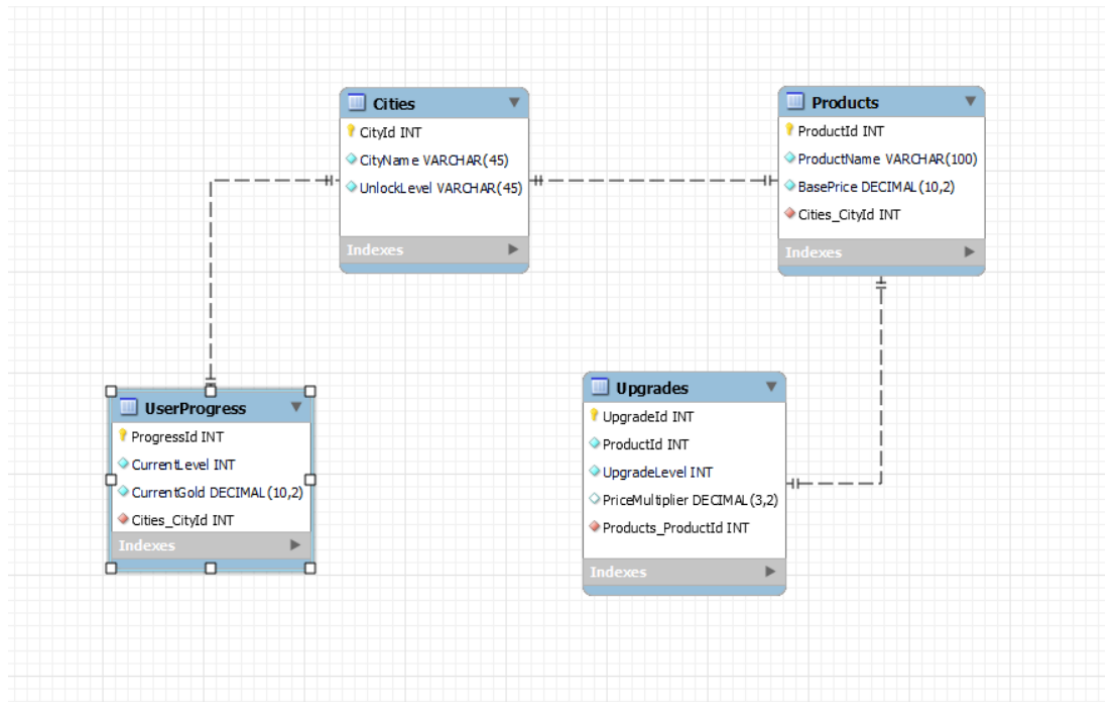
5. Map button



6. Upgrade button



4.4 Entity Relationship Diagram



Cities Table

This table represents the cities that can be explored or unlocked in the game. The cities often function as levels or stages in the game.

CityID: The unique identifier for the city.

CityName: The name of the city.

UnlockLevel: The user level at which the city becomes unlocked.

Products Table

This table includes the dishes or items that users can sell within the game. Each product might have a base price and certain attributes that could be specific to a city.

ProductID: The unique identifier for the product.

ProductName: The name of the product.

BasePrice: The starting price of the product, which may change as the game progresses.

CityID: Indicates which city the product is available in.

Upgrades Table

This table details the enhancements that users can make to upgrade their food items or restaurant equipment.

UpgradeID: The unique identifier for the upgrade.

ProductID: The identifier of the product being upgraded.

UpgradeLevel: The level of the upgrade.

PriceMultiplier: The price increase factor. As the upgrade level goes up, the sale price is multiplied by this factor.

UserProgress Table

This table tracks the progress of the user within the game.

ProgressID: The unique identifier for the progress entry.

CityID: The city where the user is currently located.

CurrentLevel: The current level of the user.

CurrentGold: The current amount of gold that the user possesses.

4.5 Technologies and Tools

List the technologies and tools you are planning to use in your project. If you are inexperienced in using them, explain how you will learn using them.

Unity Version 2022.3.6.f1

C#

Git version 3.6.6

Blender version 4.0; We learned how to use Blender by watching tutorials on YouTube, Udemy and the official Blender website.

7. Future Work

Provide a Project Plan to implement your project in the second semester.

Our plan is to complete all sections of the game and meet some requirements to improve its performance.

8. References

- <https://www.blender.org/>
- <https://github.com/>
- <https://www.youtube.com/>
- <https://assetstore.unity.com/>
- <https://unity.com/>
- https://www.canva.com/tr_tr/
- <https://freesound.org/>
- <https://www.udemy.com/>
- <https://www.freepik.com/>
- <https://colorhunt.co/>