



**Maratha Vidya Prasarak Samaj's
K.R.T. Arts, B.H. Commerce & A.M. Science (K.T.H.M.) College,
Nashik.
(2019-2020)**

**A PROJECT REPORT ON
“PIZZA XISHI”
FOR
VASUNDHARA VISION**

**Developed by
Yash Rajeshbhai Patel
M.Sc. (Computer Science)**

**Under the Guidance of
Prof. Mrs. K. D. More**

CERTIFICATE OF COMPLETION

TO WHOM IT MAY CONCERN


This is to certify that Mr. **Yash Rajeshbhai Patel** from **K.R.T. Arts, B.H. Commerce and A.M. Science (K.T.H.M.) College, Nashik** student of final year MSc (Computer Science) has worked as an intern Unity Game Developer in this organization. During his training in 'development team', he has completed project work on "**Pizza Xishi**".

He has worked as a team member and delivered the Project on time and with expected quality and efficiency.

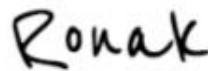
We wish him all the best for his future assignment and work.

Duration: 18th November 2019 to 18th May 2020

Technology: Unity Game Development



Ms. Yuvangi Patel
HR Manager



Mr. Ronak Pipaliya
Project Guide

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1. ACKNOWLEDGEMENT: -

With great pleasure, I would like to thank all-important individuals in the development of the project "**Pizza Xishi**". However, it would not have been possible without the kind support and help of many; I would like to express my deep sense of gratitude towards all those who have played an individual and organization. I would like to extend my thanks to all of them.

I am highly indebted to the **VASUNDHARA VISION** and **Mr. Ronak Pipaliya** for their guidance and constant supervision as well as for providing necessary information regarding the project & also for their support in completing the project.

I wish to thank Prof. **Mrs. K. D. More** our project guide for helping, guiding us from time to time and cooperating with our tight office schedules throughout the project.

I wish to thank **Dr. Mr. M. N. Shelar** for giving opportunity and boosting our level of confidence and making this project successful.

I would like to express my special gratitude and thanks to industry persons for giving me such attention and time.

My thanks and appreciations also go to my colleagues in developing the project and people who have willingly helped me out with their abilities.

2. COMPANY PROFILE: -VASUNDHARA VISION

Vasundhara Vision is a well-established IT Company in Surat. We built our reputation on providing superior firmware technology, innovative software solutions.

Our company develops mobile applications like Android Development, iOS Development, Game Development and Web Design. Web Development, SEO Optimization, Logo Design, etc. for clients all over the world. We would like to offer our best services to you.

Our team includes professional mobile developers, professional designers, web developers, professional game developers that focus on delivering high-quality code, design, functionality. user-friendliness in each app and all Services we take.

Each application and every service are customs made meaning it will be developed using the latest methods and technologies will be scalable to any point.

We have worked with clients for over 6 years. Some of our clients include Canada, USA, UK and many other countries.

Contact: +91 8460277501

Registered Office: 201/202/203/204, Oasis Corner,
Dhanmora Char Rasta, Katargam, Surat. (India)

Website: <https://vasundharavision.com>

3. INTRODUCTION OF PROJECT: -

Look at the real-time machine where pizza appears, let the xishi fall steadily into the middle of the pizza, let the pile of pizza piled up higher.

- **DESCRIPTION OF GAMEPLAY: -**

Let's jump on the pizza flying over from left to right. Continuous jump in the center of the pizza will be a perfect jump, multiple perfect jumps to improve scores, aim for higher targets and jump.

- **GAME FEATURES: -**

- ◆ fingertip cute game: -

Just move your fingers and get started easily. A wonderful mood and the rhythm of the xishi's beating challenge the perfect jump and higher scores.

- ◆ Addictive magic gameplay: -

Super cute animated sound, fun. Many perfect jumps, you can see the super-difficult performance of the pizza xishi.

- ◆ Skin collection Pizza unlock: -

Use the collected gold coins to buy pizza in the pizza shop, achieve the achievement to unlock the new pizza background, and experience the fun of collecting.

4. SYSTEM ANALYSIS: -

4.1 WORKING OF EXISTING SYSTEM: -

- The game is very big in memory, because of some extra feature.
- It takes lots of space in ram when the user starts the game.
- It has lots of animation at the time of jumps.
- It has lots of collections in shops for pizza & girls.
- Pizza speed is in some limit and sometimes it creates big random delays to generate itself.

4.2 OBJECTIVE OF PROPOSED SYSTEM: -

- The game should support low-end devices & run smoothly.
- It has attractive animation with slow-motion & shining effects.
- It doesn't have a shop with a girl skin.
- Pizza appears in perfect time & as you reach a higher score the speed of pizza will increase also.
- Added animated UI objects.

5. FEASIBILITY STUDY: -

At VASUNDHARA VISION, the feasibility analysis is designed to determine whether or not, given the project environment, the proposed project will be successful. It is useful to evaluate the cost and the benefit of the requested system. Feasibility study tries to anticipate future scenarios of development. The proposed system was reviewed considering three feasibility tests: -

1. ECONOMIC FEASIBILITY: -

Economic feasibility considers the cost/benefit analysis of the proposed project. The benefit is always expected to be overweighing the cost. The economic feasibility is helpful to find the system development cost and checks whether it is justifiable. For that it checks, investigation cost, software and hardware cost, training cost, salaries, Maintenance cost etc. The hardware/software setup required for the development and efficient operation of the system is already available. So, the cost incurred is less. The cost of developing the system is less than the benefits that will be provided by the proposed system. Hence the proposed system is economically feasible.

2. TECHNICAL FEASIBILITY: -

Technical feasibility center around the existing computer system (hardware, software, etc.) and to what extent it can support the proposed addition. It checks whether the work for the project can be done with the current equipment, existing technologies, and available manpower.

3. OPERATIONAL FEASIBILITY: -

It is the measure of how well a proposed system solves the problems and takes advantage of opportunities identified during scope definition and how it satisfies the requirements identified in the requirement analysis phase of system development. It basically tells us that the proposed system is practically possible or not.

6. REQUIREMENT ANALYSIS: -

If the feasibility report is positive towards undertaking the project, the next phase starts with the gathering requirements from the users. Analysts and engineers communicate with the client and end-user to know their ideas on what the game should provide and which features they want the game to include.

Requirements Elicitation is the process to find out the requirements for the intended system by communicating with clients, end-users and others who have a stake in the system development.

There are various ways to discover the requirements.

1. Questionnaires: -

Questionnaires are much more informal, and they are good tools to gather requirements from stakeholders in remote locations or those who will have only minor input into the overall requirements. Questionnaires can also be used when you have to gather input from dozens, hundreds, thousands of people.

2. Brainstorming: -

On some projects, the requirements are not "uncovered" as much as they are discovered. In this type of project, simple brainstorming may be the starting point. The appropriate subject matter experts get into a room and start creatively brainstorming what the solutions might look like. After all the ideas are generated, the participants prioritize the ones they think are the best for this solution. The resulting consensus of best ideas is used for the initial requirements.

3. Observation: -

Team of experts visits the client's organization or workplace. They observe the workflow at client send and how execution problems are dealt with. The team itself draws some conclusions which aid to form requirements expected from the game.

7. HARDWARE & SOFTWARE REQUIREMENTS: -

➤ Development Side: -

Hardware: -

- OS: -macOS
- Processor: -Intel i5 or Higher
- Ram: - 8GB or Higher
- Memory: - 512GB SSD

Software: -

- Unity 3D
- Android Studio
- XCode
- Rider (JetBrains)

➤ User Side: -

Hardware: -

- OS: -Android/iOS
- Architecture: - ARM64/A7 or Higher
- CPU: -1.5 GHz or Higher
- RAM: - 2GB or Higher

Software: -

- Play Store/Apple Store to download

8. MODULES IN PROPOSED SYSTEM: -

In this system, we only consist of 1 **User** module.

- **User: -**

Here users can play the game & go to make a high score.

They can manage the settings of volume, vibration. They can set languages from the available list.

We have a shop in the game. And users can purchase an item of pizza from this shop.

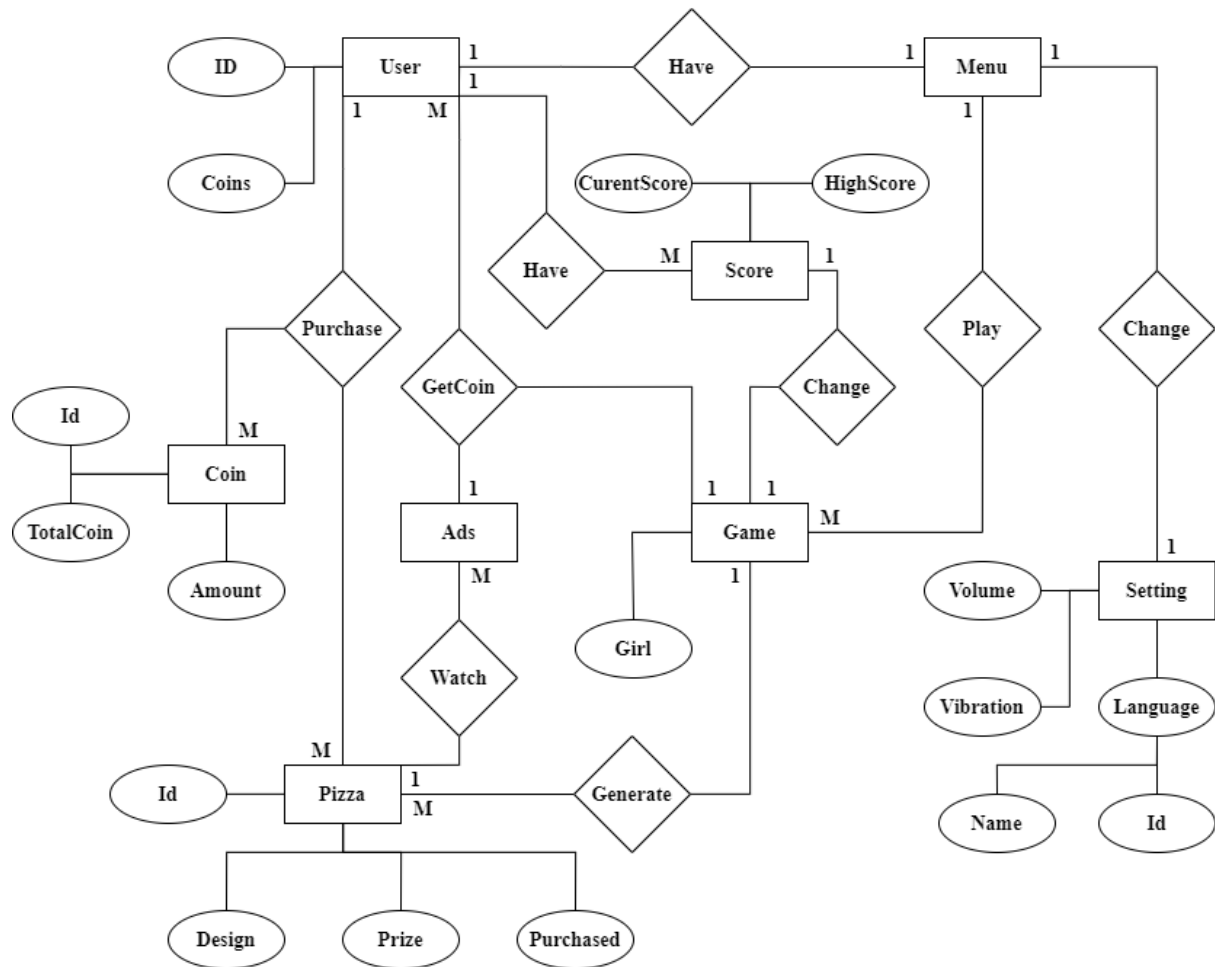
If the user doesn't have enough money to purchase an item from the shop then they can also purchase coins from the IAP (In-App Purchase) panel.

We Provide retry option with ads option if user loss & want to retry for the best high score.

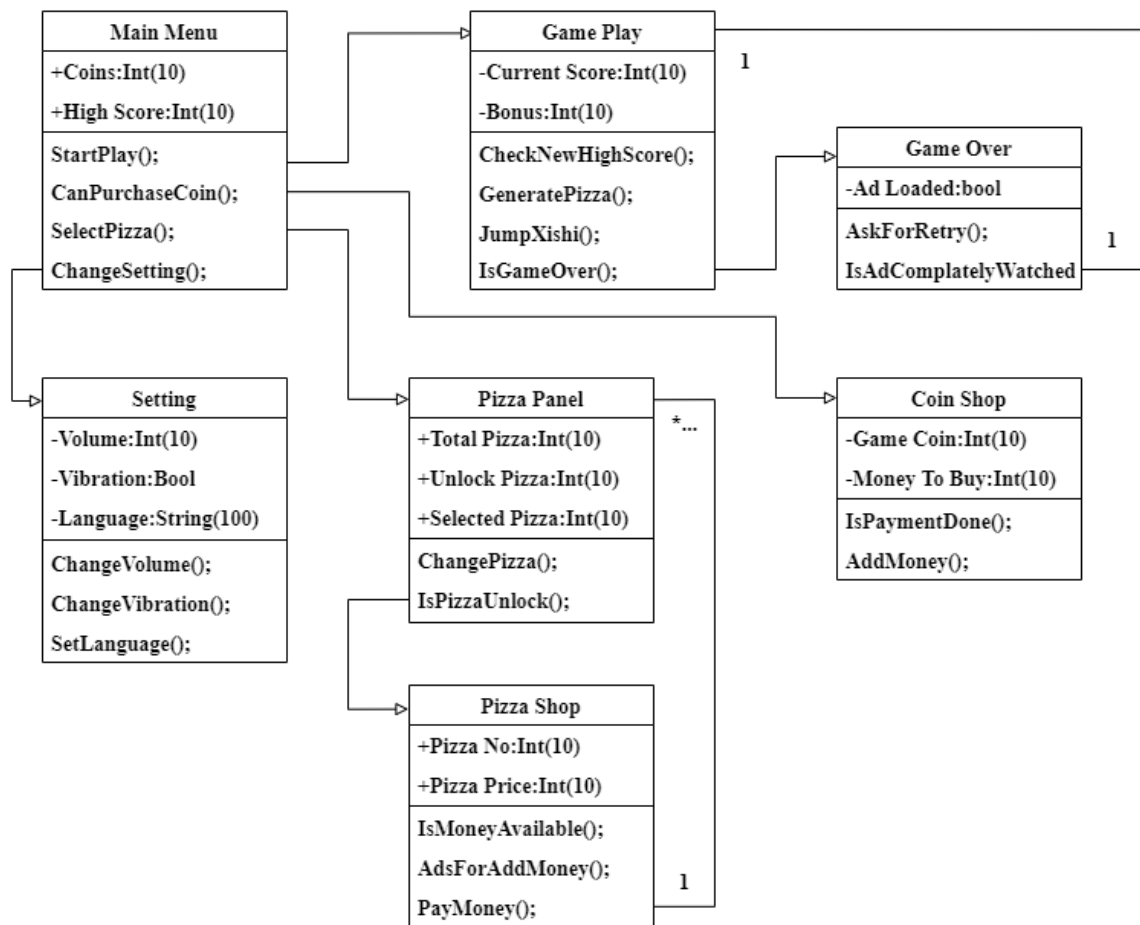
9. DIAGRAM: -

- I. E-R DIAGRAM**
- II. CLASS DIAGRAM**
- III. OBJECTIVE DIAGRAM**
- IV. USE CASE DIAGRAM**
- V. ACTIVITY DIAGRAM**
- VI. SEQUENCE DIAGRAM**
- VII. COMPONENT DIAGRAM**
- VIII. DEPLOYMENT DIAGRAM**
- IX. COLLABORATION DIAGRAM**

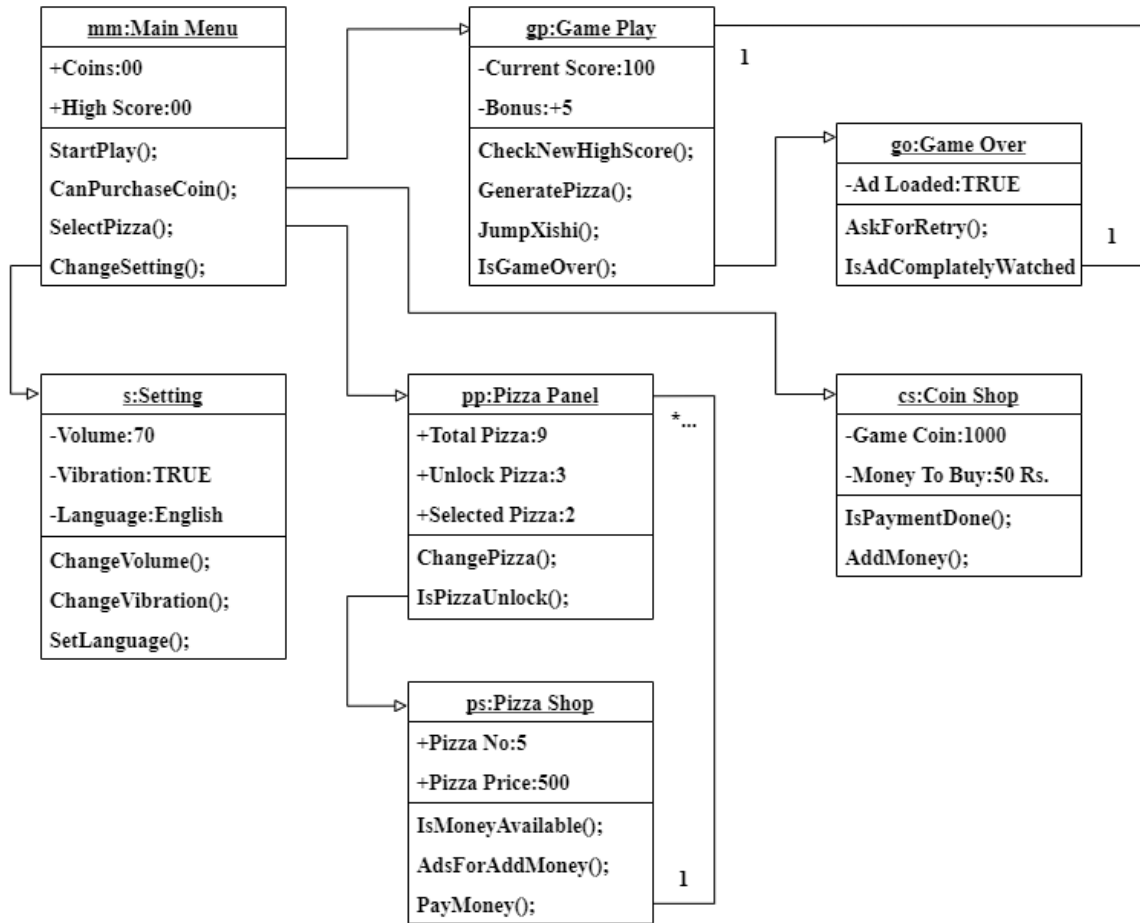
I. E-R DIAGRAM



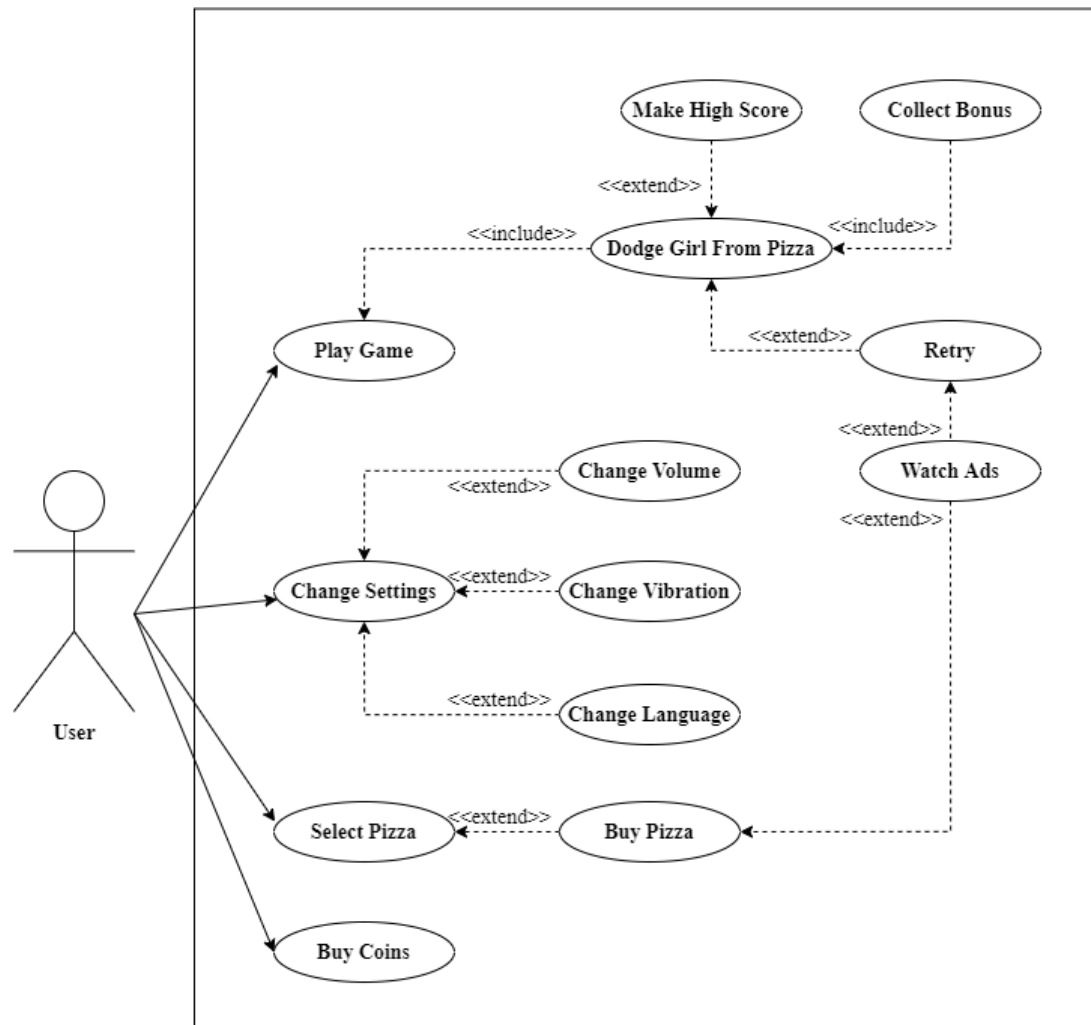
II. CLASS DIAGRAM



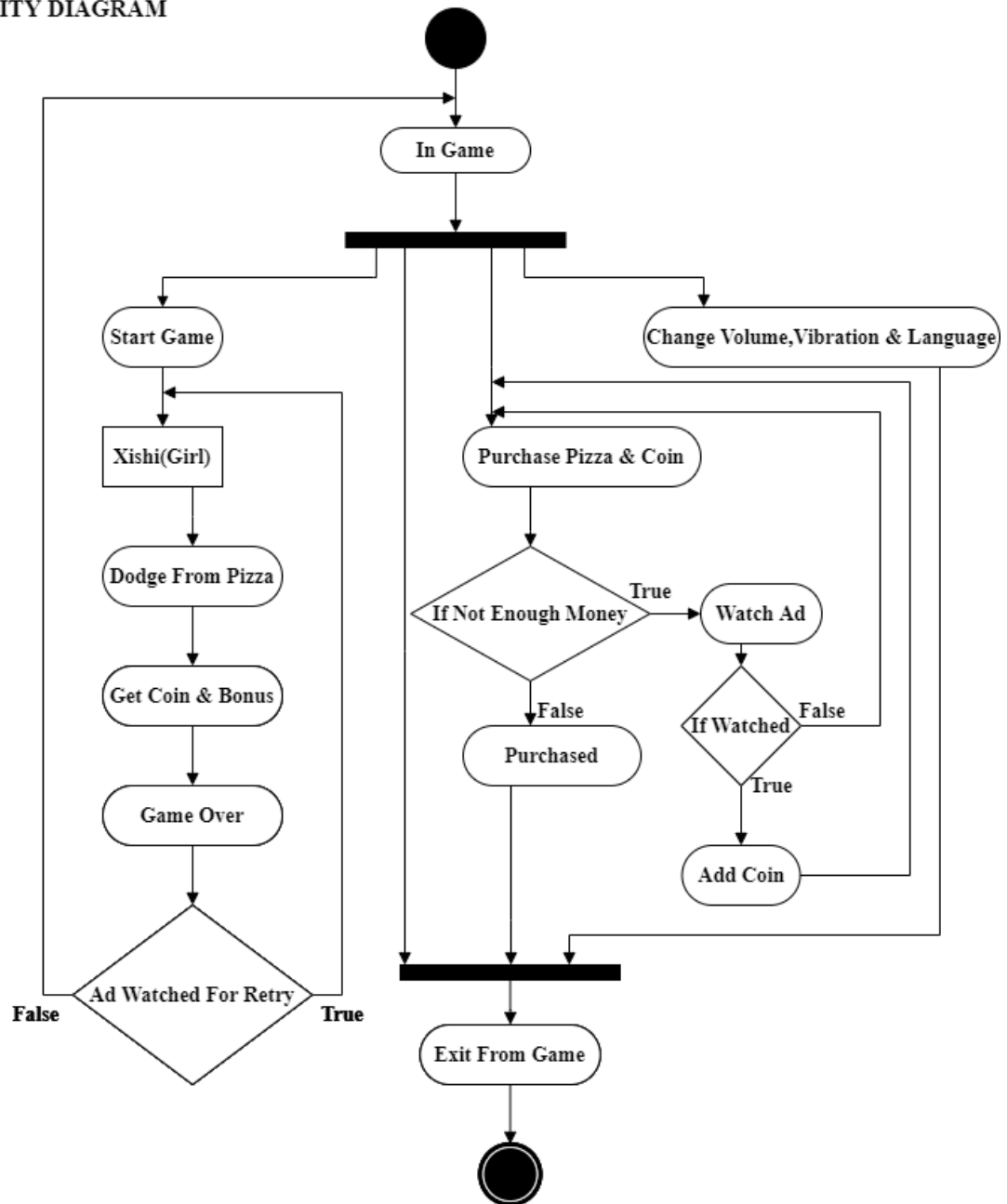
III. OBJECT DIAGRAM



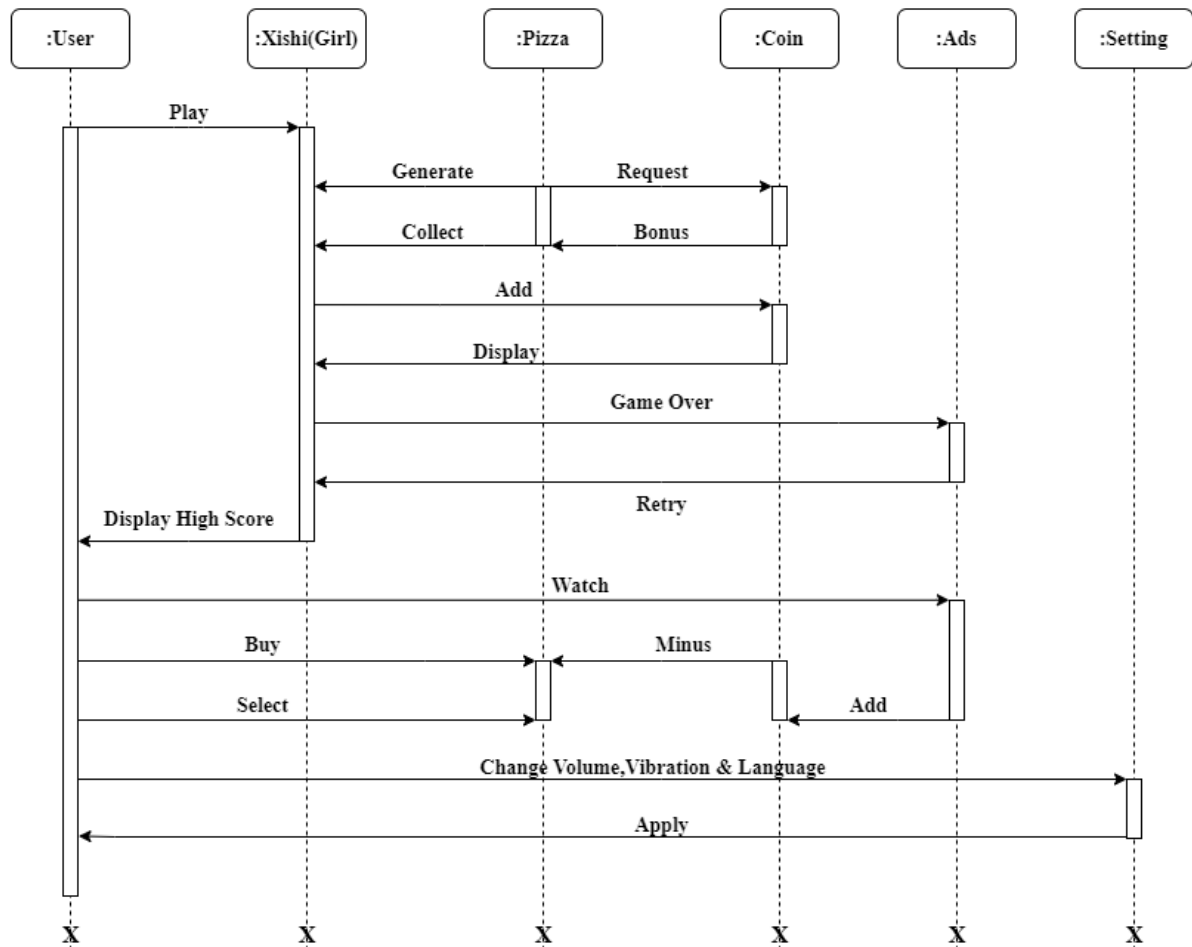
IV. USE CASE DIAGRAM



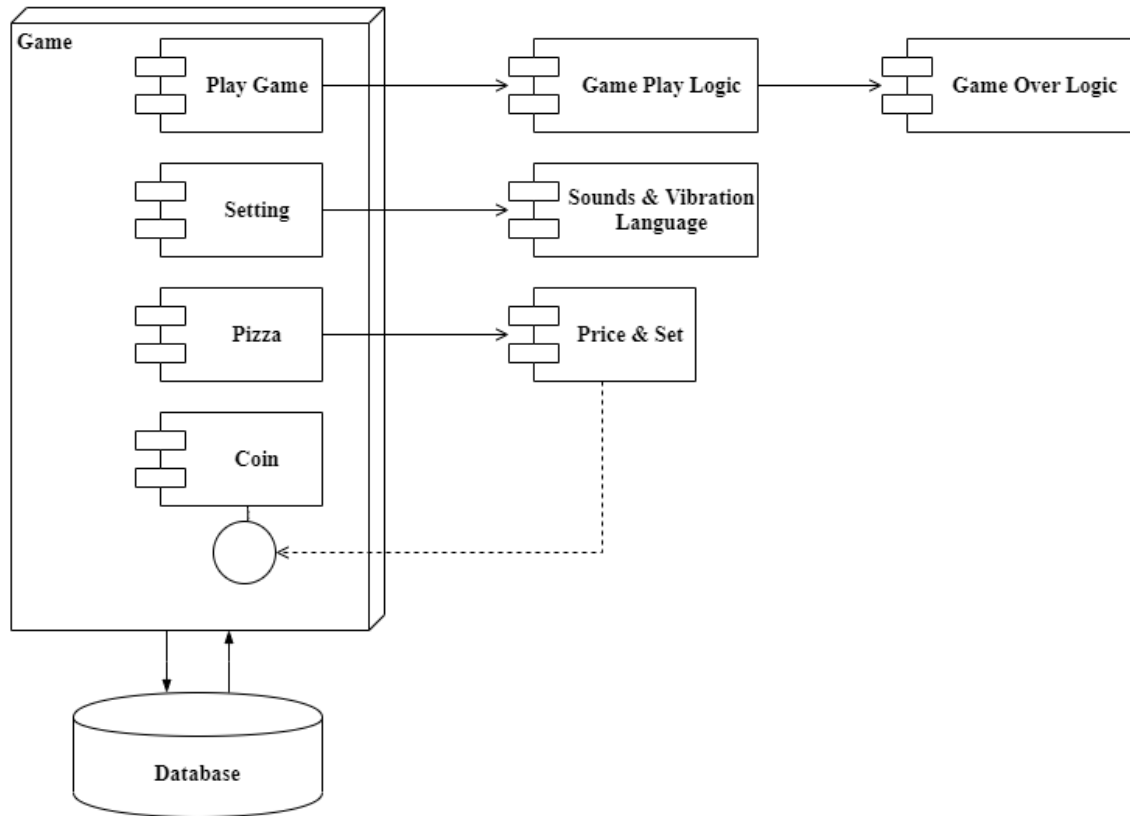
V. ACTIVITY DIAGRAM



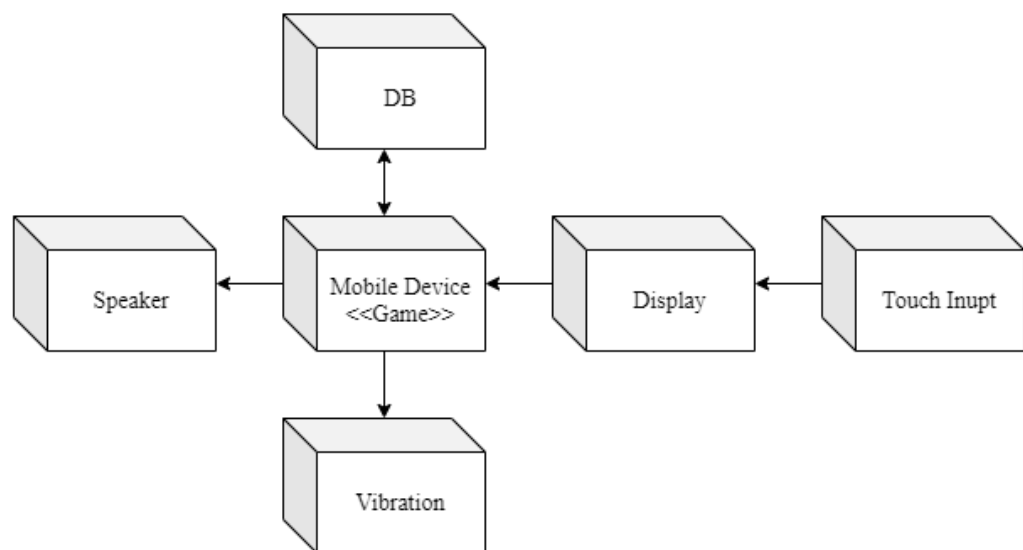
VI. SEQUENCE DIAGRAM



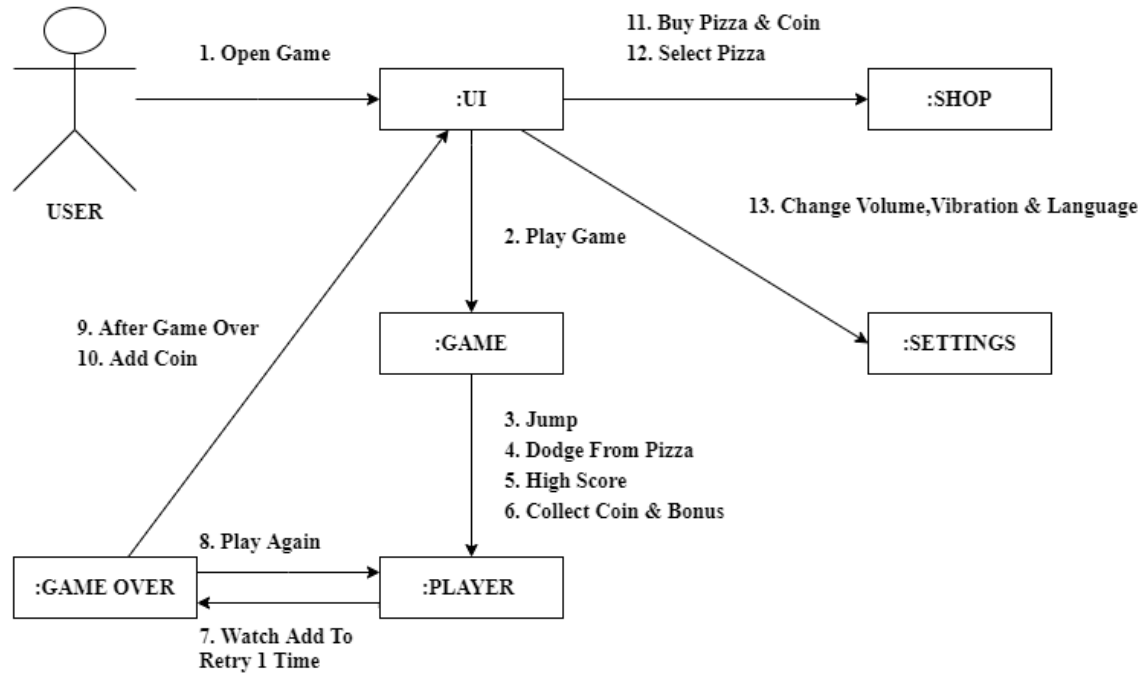
VII. COMPONENT DIAGRAM



VIII. DEPLOYMENT DIAGRAM



IX. COLLABORATION DIAGRAM



10. DATA DICTIONARY: -

Player Model

Field	Type	Key	Extra	Null
Id	Int (10)	Primary		No
HighScore	Int (10)			No
Coin	Int (10)			No
Volume	Float (10)			No
Vibration	Bool			No
LanguageNo	Int (10)			No

Coin Model

Field	Type	Key	Extra	Null
CoinId	Int (10)	Primary	Auto_increment	No
ReceivingAmount	Int (10)			No
Price	Int (10)			No

Pizza Model

Field	Type	Key	Extra	Null
PizzaId	Int (10)	Primary	Auto_increment	No
Design	Varchar (100)			No
Amount	Int (10)			No
Purchased	Bool			No
IsSelected	Bool			No

11. TEST PROCEDURE & IMPLEMENTATION: -

ON INIT GAME:

Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCO1	Hardware	Device hardware configurations	Match with requirement	Successfully match and install	Pass
TCO2	Screen size	Display ratio (1080X1920)	Set UI fit to screen	Successfully fit to screen	Pass
TCO3	Data/Value	Default data (Coin-100, High Score-0, Volume-50, Vibration-off)/ Previous value (Anything)	Apply on game data & settings	Successfully applied	Pass
TCO4	Audio sources	Address of files	Play music on various functionality	Successfully playing	Pass

MAIN SCREEN:

Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCM 1	Animation	Animator values	Run animations	Successfully animating	Pass
TCM 2	Multi-Touch	Multiple finger inputs	Can't accept more than 1 touch	Accepting single touch	Pass
TCM 3	Setting	Touch to setting	Open setting	Successfully open	Pass
TCM 4	Coin shop	Touch to coin shop	Open coin shop	Successfully open	Pass
TCM 5	Pizza shop	Touch to pizza shop	Open pizza	Successfully open	Pass
TCM 6	Play game	Touch to start	Start game	Successfully start	Pass

SETTING:

Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCS1	Volume	Adjust slider point (100)	Change volume of game	Successfully changing	Pass
TCS2	Vibration	Toggle button	Change state of on/off	Successfully changing	Pass
TCS3	Language	List of language	Show languages	Successfully open language	Pass
TCS4	Close	Touch to close	Close setting	Successfully close	Pass

LANGUAGE:

Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCL1	Default	Get saved/ Default language	English/ (Other)	English	Pass
TCL2	Switch/ Select	Select other language (Simple Chinese)	Save and apply changes on game	Successfully changed and saved	Pass
TCL3	Close	Touch close	Close language	Successfully close and open setting	Pass

COIN SHOP:

Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCC1	Default	Get actual price for set of coins (already fixed)	List of coin set with price (5 set)	Successfully get (5 set)	Pass

PIZZA SHOP:

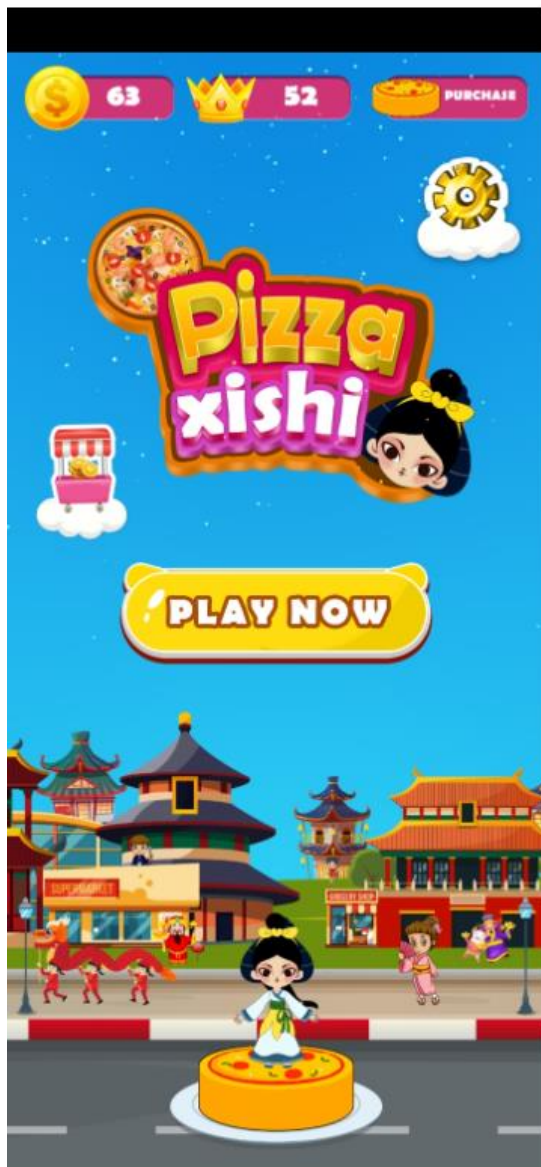
Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCP1	Total Pizza	Get all pizza list	9 pizza	9 pizza	Pass
TCP2	Current pizza	Default values (1)/ previous saved (3)	3	3	Pass
TCP3	Select pizza	5th pizza	Not purchased so show suggestion to purchase it first then select it	Displayed message (go to pizza seller)	Pass
TCP3	Purchase pizza	5th pizza (500 Coin)	First check money if not enough to buy then reject else accept	Purchased	Pass
TCP4	Ad video for money	" +50"	Watch complete video to add money	Watched and added money	Pass
TCP5	Close	Touch close	Close pizza/seller	Successfully close	Pass

GAME PLAY:

Tc-No	Tc-Name	Test Data	Expected Result	Actual Result	Status
TCG1	Generate pizza	From left/right side	From any side	From right side	Pass
TCG2	Xishi Jump	Touch on screen	Jump animation of girl	Jumped successfully	Pass
TCG3	Regeneration	From left/right side	From any side	From left side	Pass
TCG4	Score	1 jump=1 point	" +1 "	1	Pass
TCG5	Coin	if jump in middle of pizza =1 coin	" +1 "	1	Pass
TCG6	Bonus	It generates with pizza at any random time comes with it	" +5 "	6	Pass
TCG7	Speed	Increase speed of pizza generation after some gap of score	After 100 point pizza generating faster	Speed incremented	Pass
TCG8	Game over	Check if current score > High score then ask for retry (watch full ad) then start game from current state else go back to home panel	Ask for retry and continue	Asked and successfully Continue	Pass
TCG9	Game over animation	Pushed xishi to other direction of pizza	open parachute then fall to the ground	Animated successfully	Pass

12. USER INTERFACE (I/O SCREENS): -

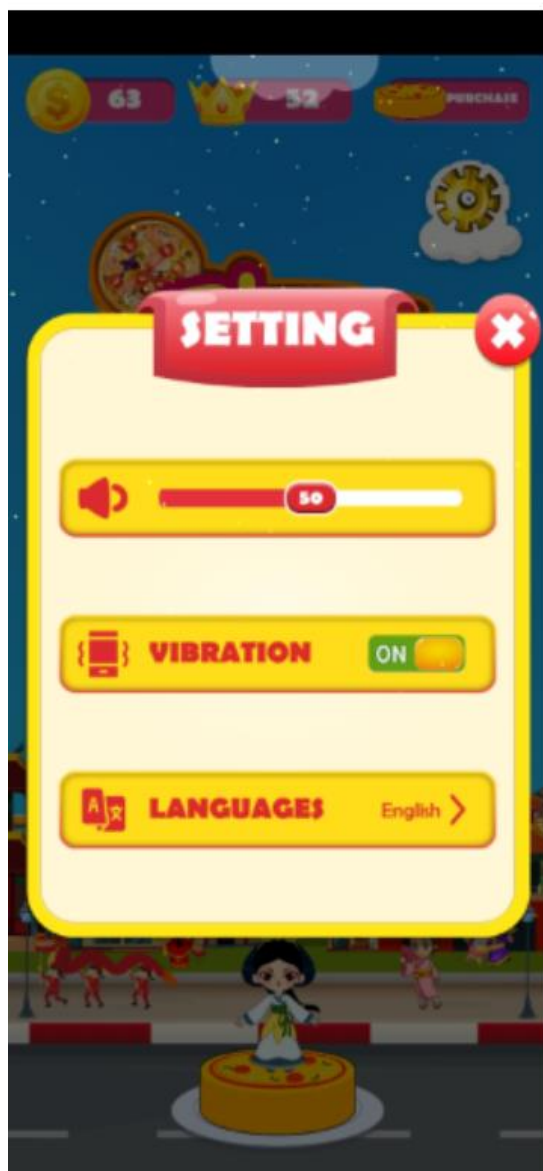
MAIN SCREEN:



COIN SHOP:



SETTING:



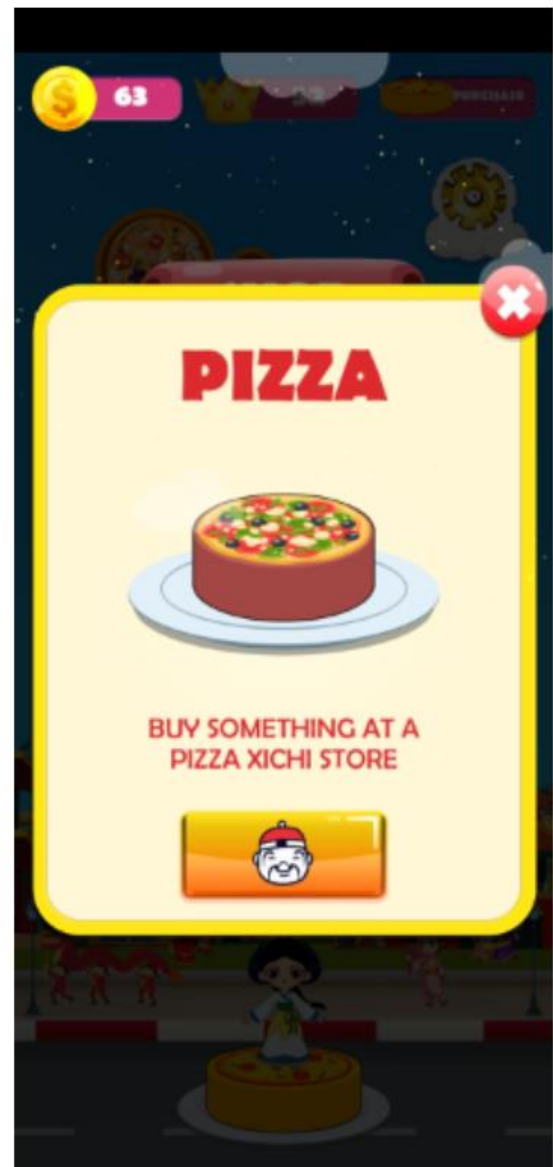
LANGUAGE:



PIZZA SHOP:



PURCHASE:



PIZZA SELLER:



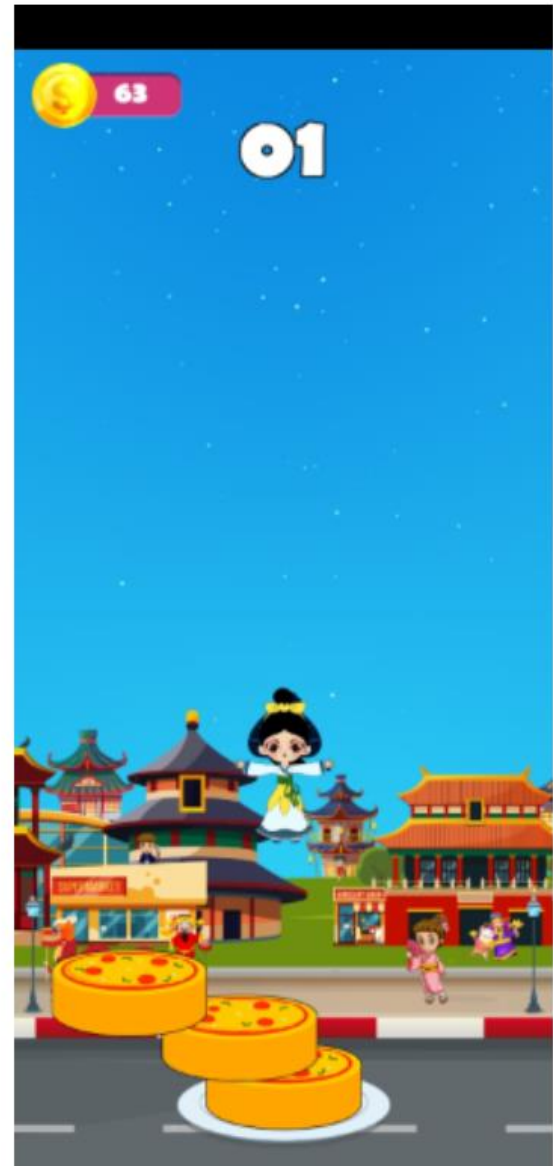
COIN WARNING:



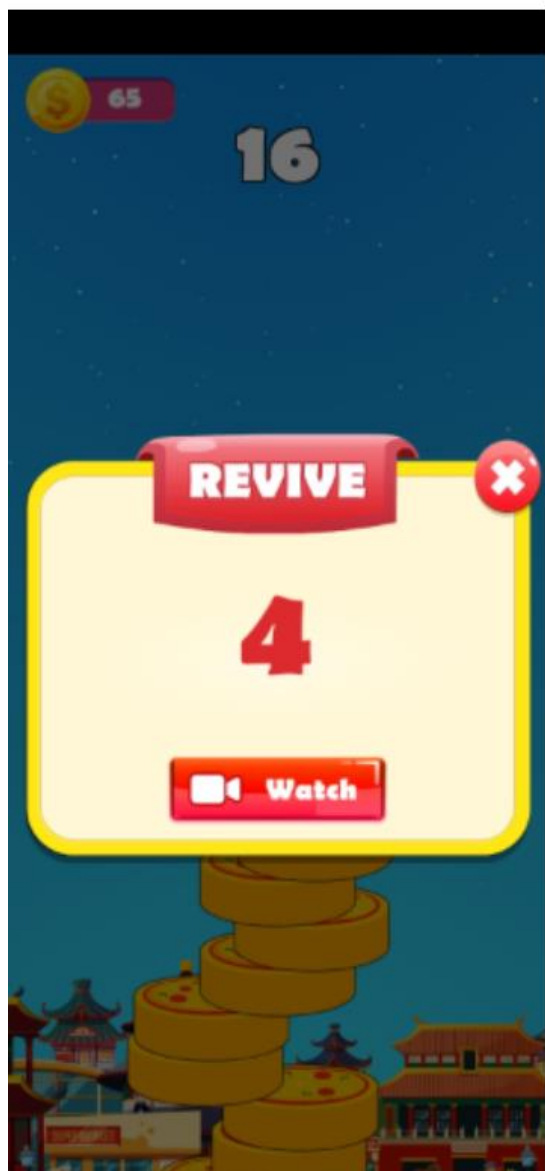
PURCHASED:



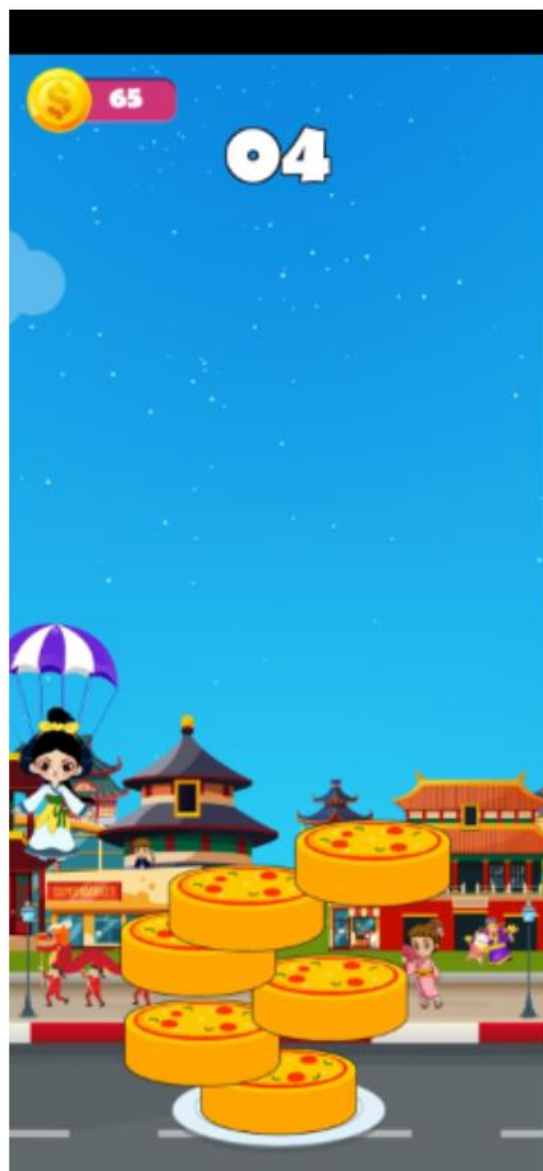
GAME START:



RETRY:



GAME OVER:



13. LIMITATION AND FUTURE ENHANCEMENT: -

- **DRAWBACKS:**

- It can hack and easily throw any device.
- If you reach some high amount of score and you try for retry, it is not going to work because of pizza speed you will lose immediately.
- If you try to watch ads continuously in the seller panel you can get lots of money easily in less time and then you can buy any pizza or unlock all of them.

- **LIMITATIONS:**

- Limited pizza design.
- 1 normal fix background.

- **FUTURE ENHANCEMENT:**

- We will add online user data saving with the use of the supported account.
- We will add leaderboard data over the worldwide user, to create competition for the high score.
- We will add the girl shop also with lots of new background for each girl.

14. CONCLUSION: -

We learned a lot through this project. This project has sharpened our concept of Game engine, animation and the software-hardware interface. We learned a lot about different documentation. The piece of software we developed is intended to serve the gamers of the world. The success of this project may give pleasure to billions of game lovers among the universe. This project not only tested our technical skills but also our temperament.

15. BIBLIOGRAPHY: -

REFERENCE BOOKS:

- Unity for Absolute Beginners
- Introduction to Game Programming Using C# and Unity 3D

WEBSITES:

- <https://docs.unity3d.com/Manual/index.html>
- <https://www.jetbrains.com/idea/documentation/>
- <https://hackr.io/tutorials/learn-unity>
- <https://www.youtube.com/user/Brackeys/featured>
- <https://answers.unity.com/index.html>