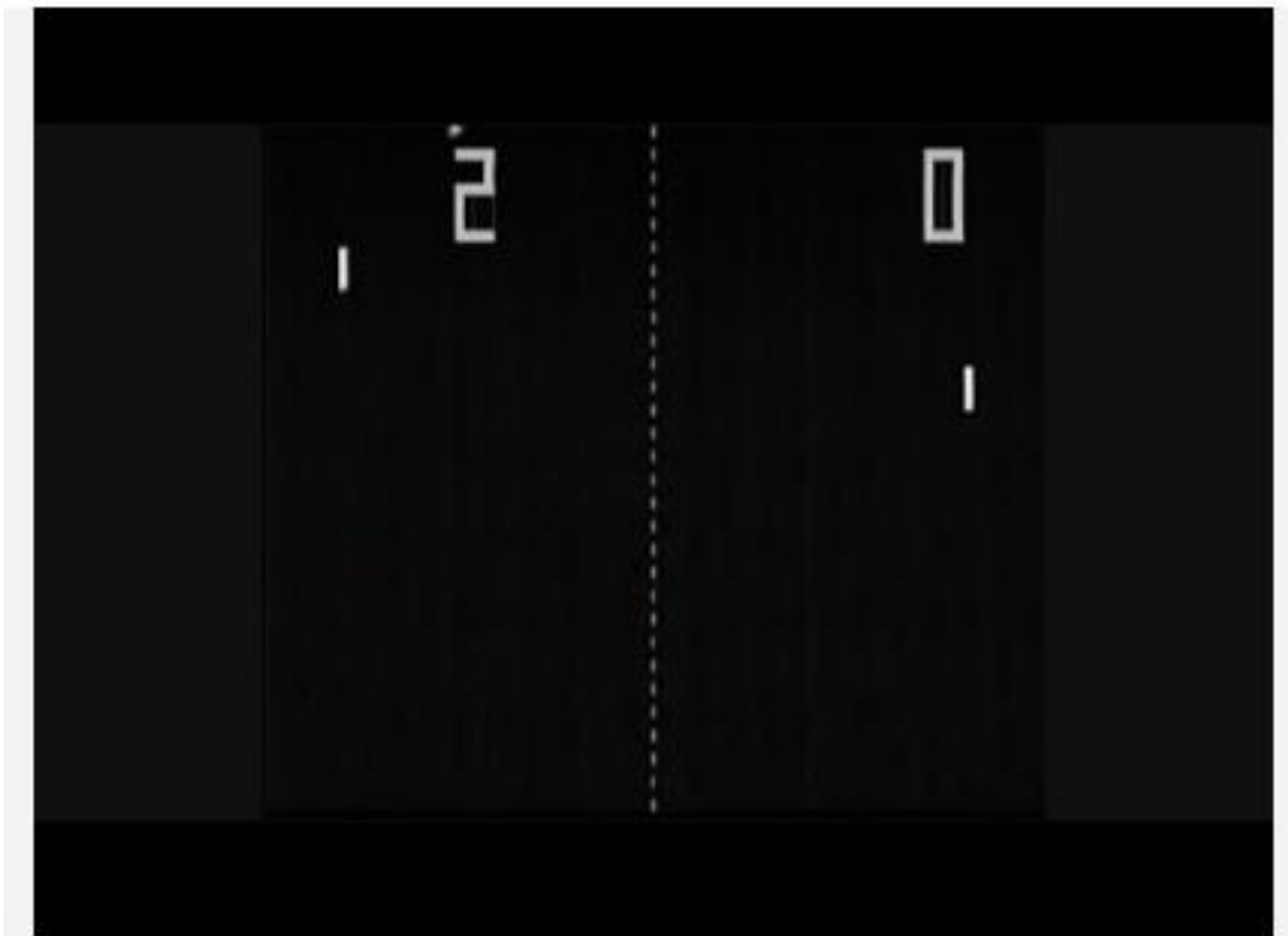# Creating a Pong Game.

Tool Used

What is a Pong Game?

Original Pong game from the 1970s.

Project
Overview

Project Title: Pong Game

The main goal of this project is to create a fun and visually engaging version of the Ping Pong game that's easy to play and runs smoothly on desktop. We'll focus on making the game responsive, simple, and exciting, with a competitive edge, while also improving on the classic design to make it feel fresh and modern.

Team Member

Sayantan Saha Utsa

Team Leader

UI/Graphics Designer

Rayian Rahman Dinan

Team Member

Game Developer

Sharfin Zaman Swaccha

Team Member

Programmer

Design Process

01
Empathize
User research, Pain Points

02
Define
User interview, Personas,
Competitive audit

03
Ideate
Paper Wireframses,Digital low-
fidelity wireframes, User flow

04
Empathize
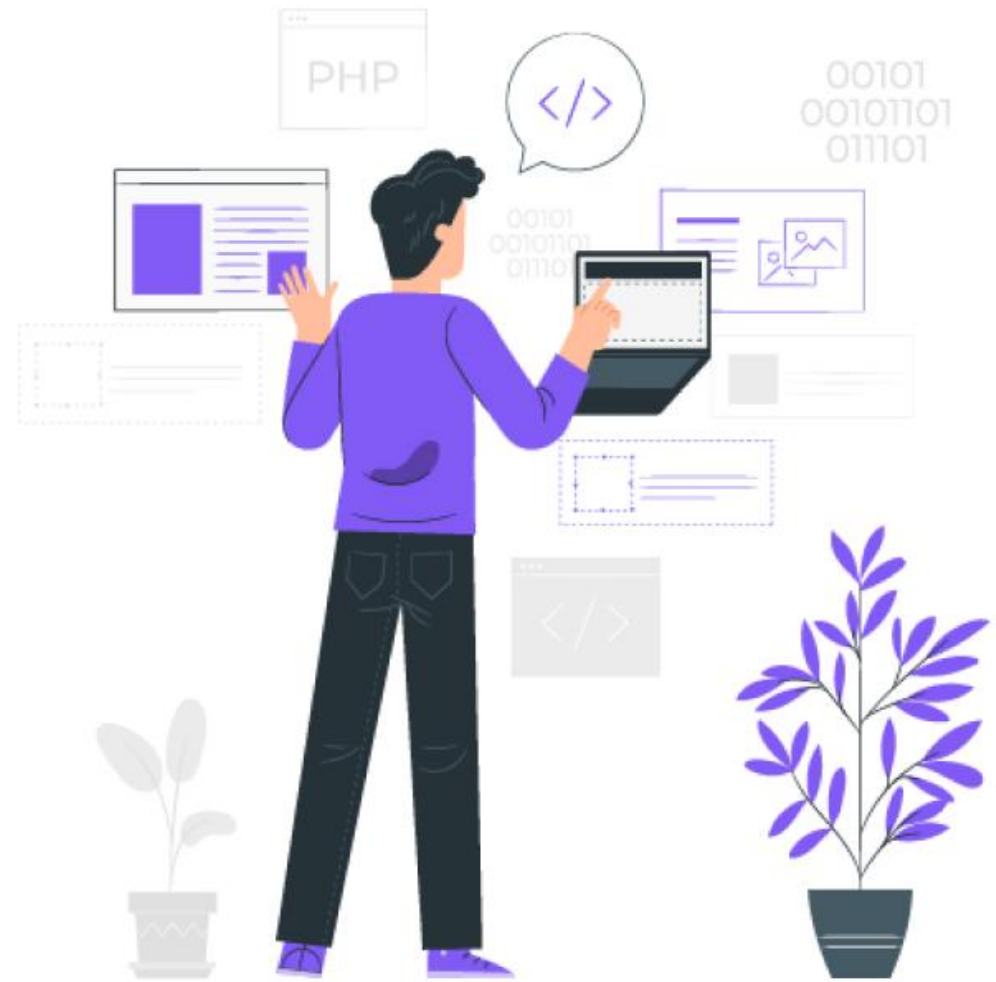High-fidelity wireframes,
Visual design, prototype

05
Test
Usability Test

Brainstorming

Explore

Discover new modes and powerup to make it more intrative.

Trackking

Track your game on online in real time.

Rewards

Earn point and redeem delicious rewards.

Offer

Try limited time Custome decoration per season

History

Lokk back at our leader board and challange yourself .
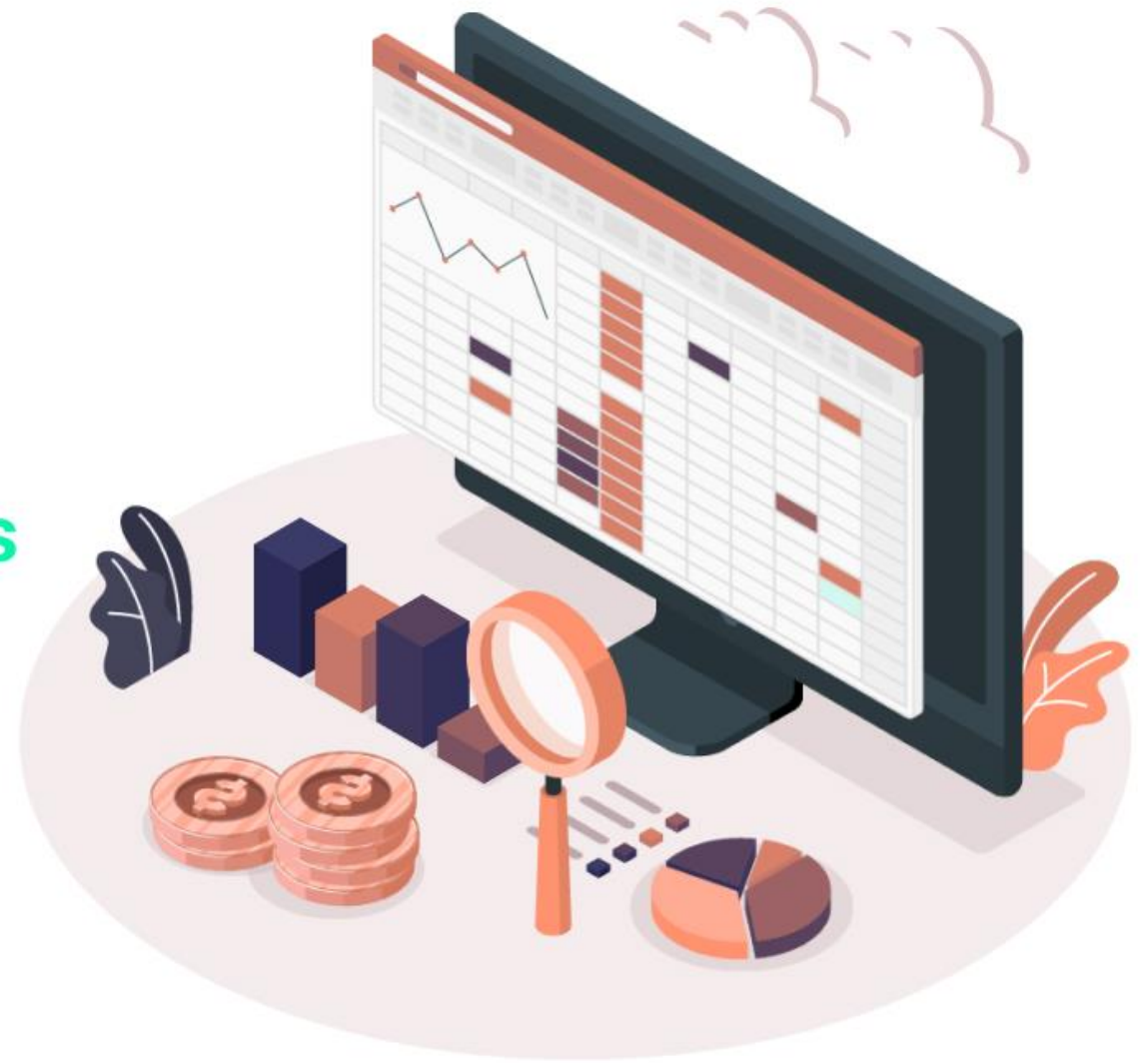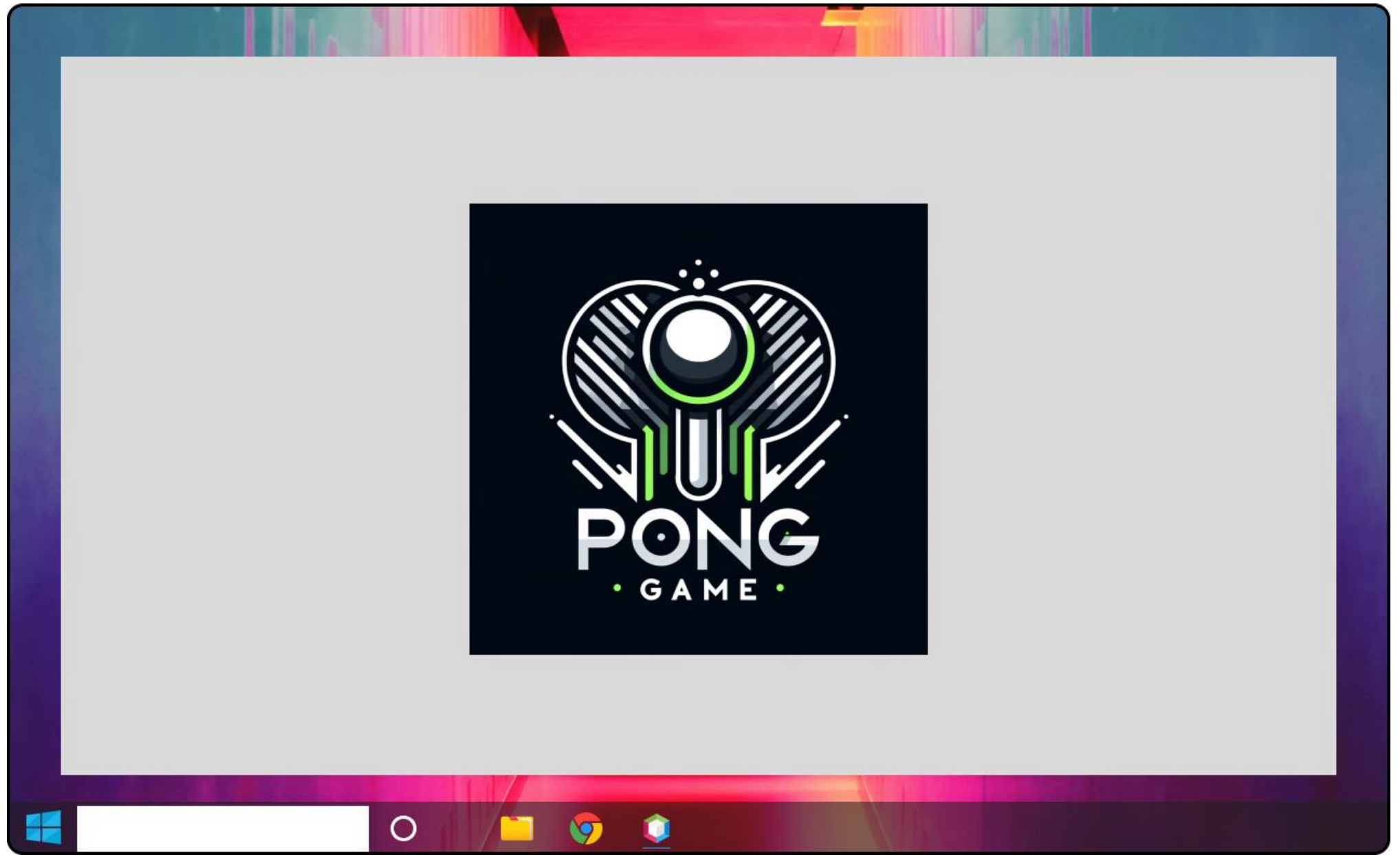
Locations

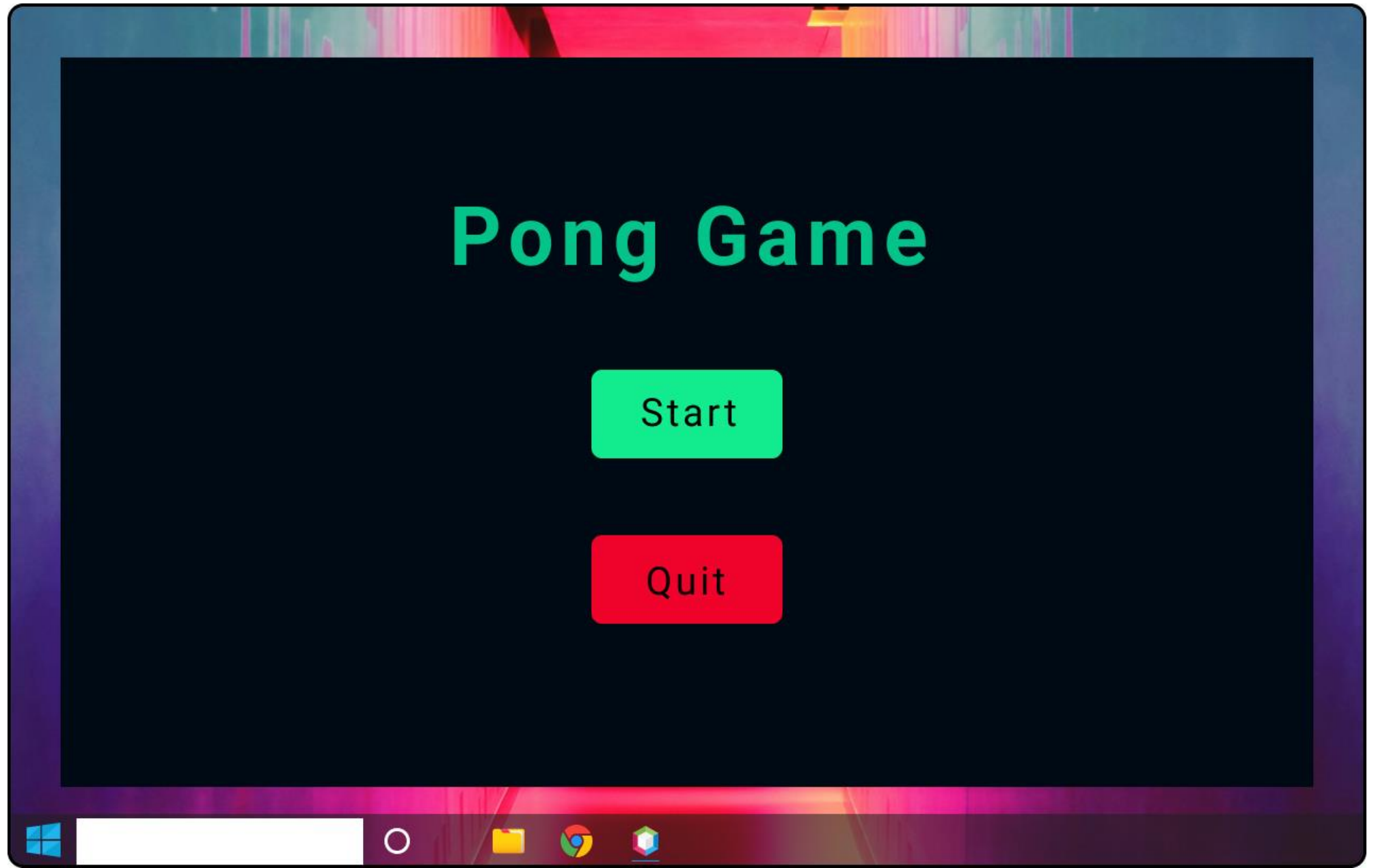Share your score to the world,

Development

User Flow

Information Architectures
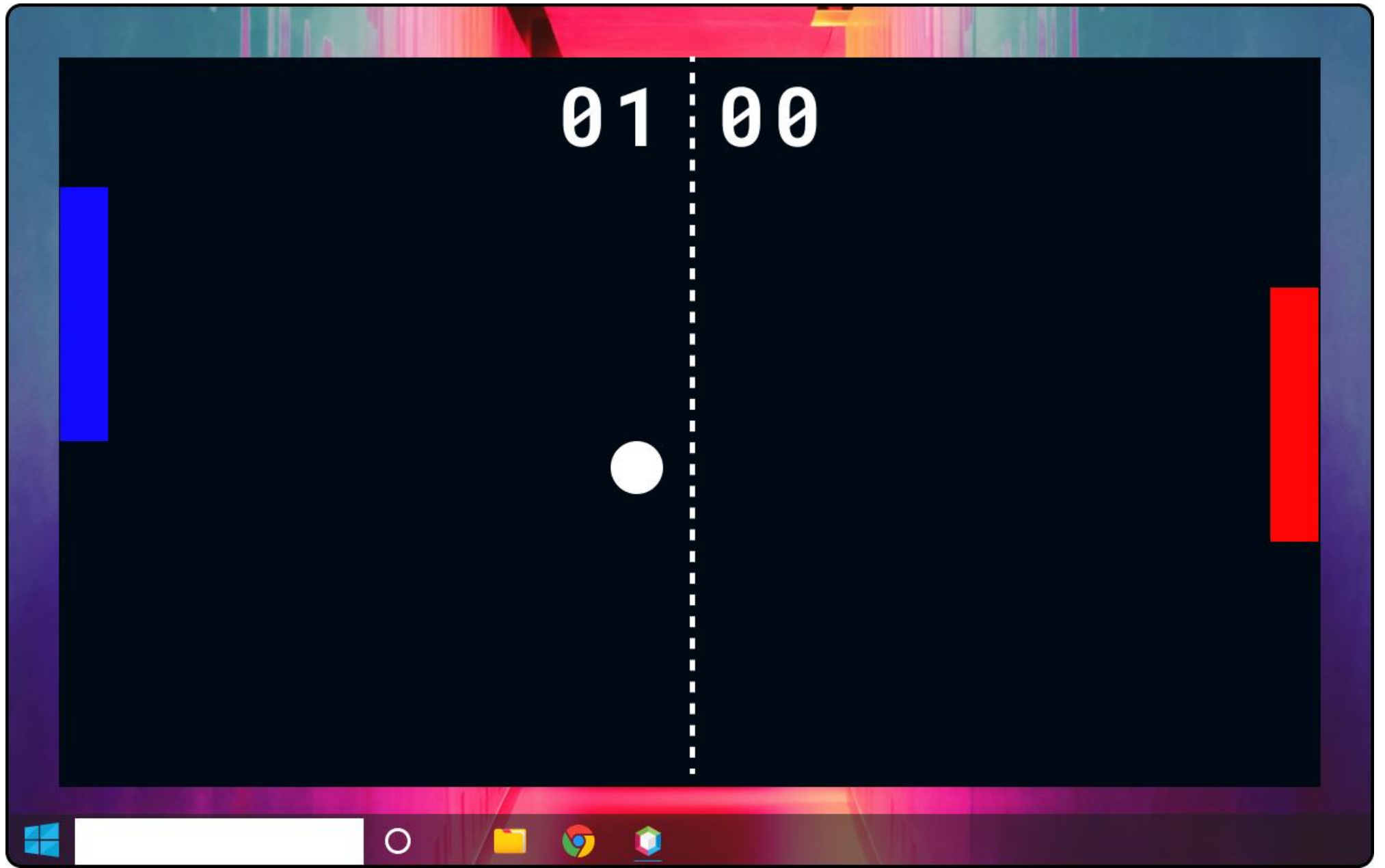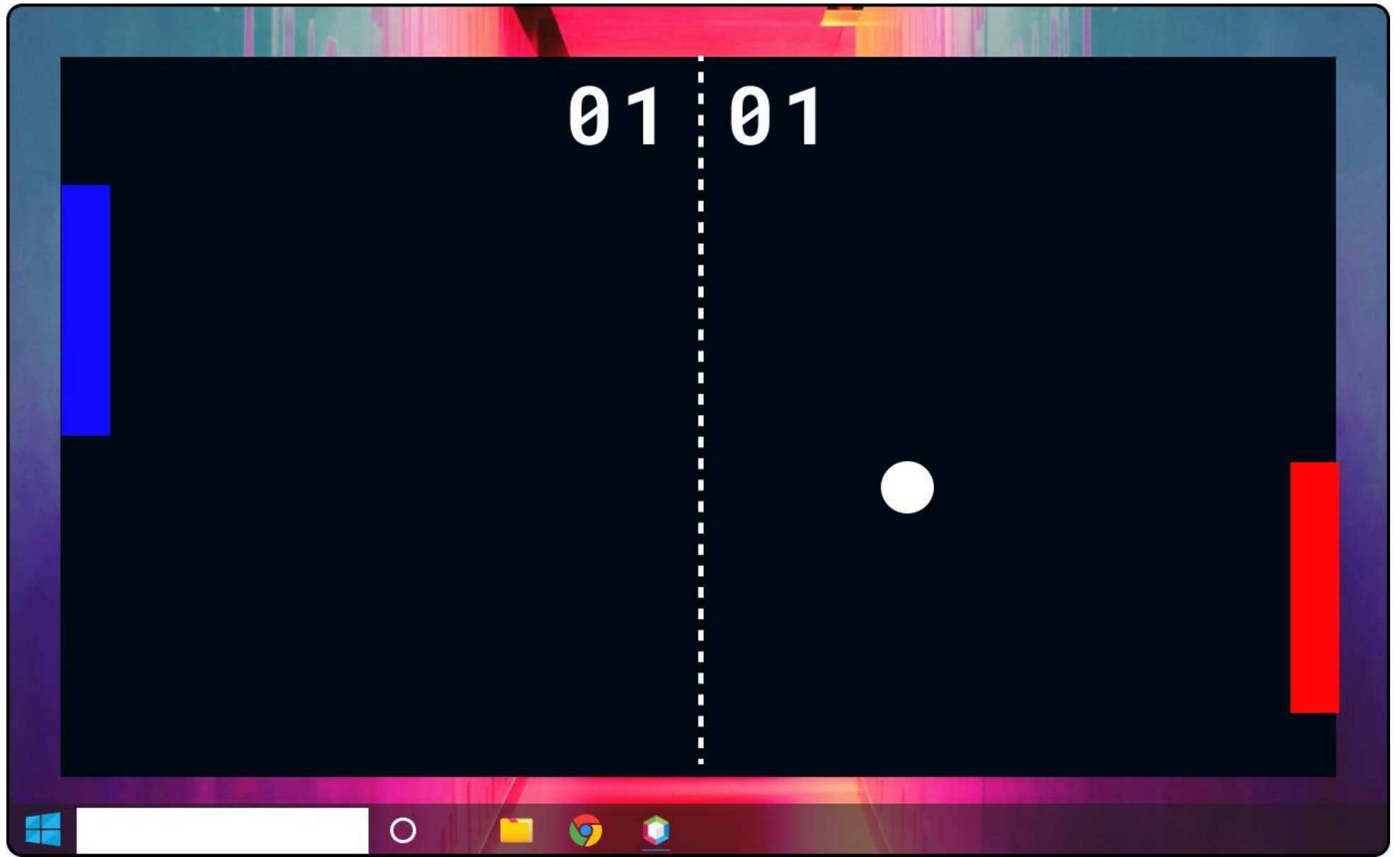
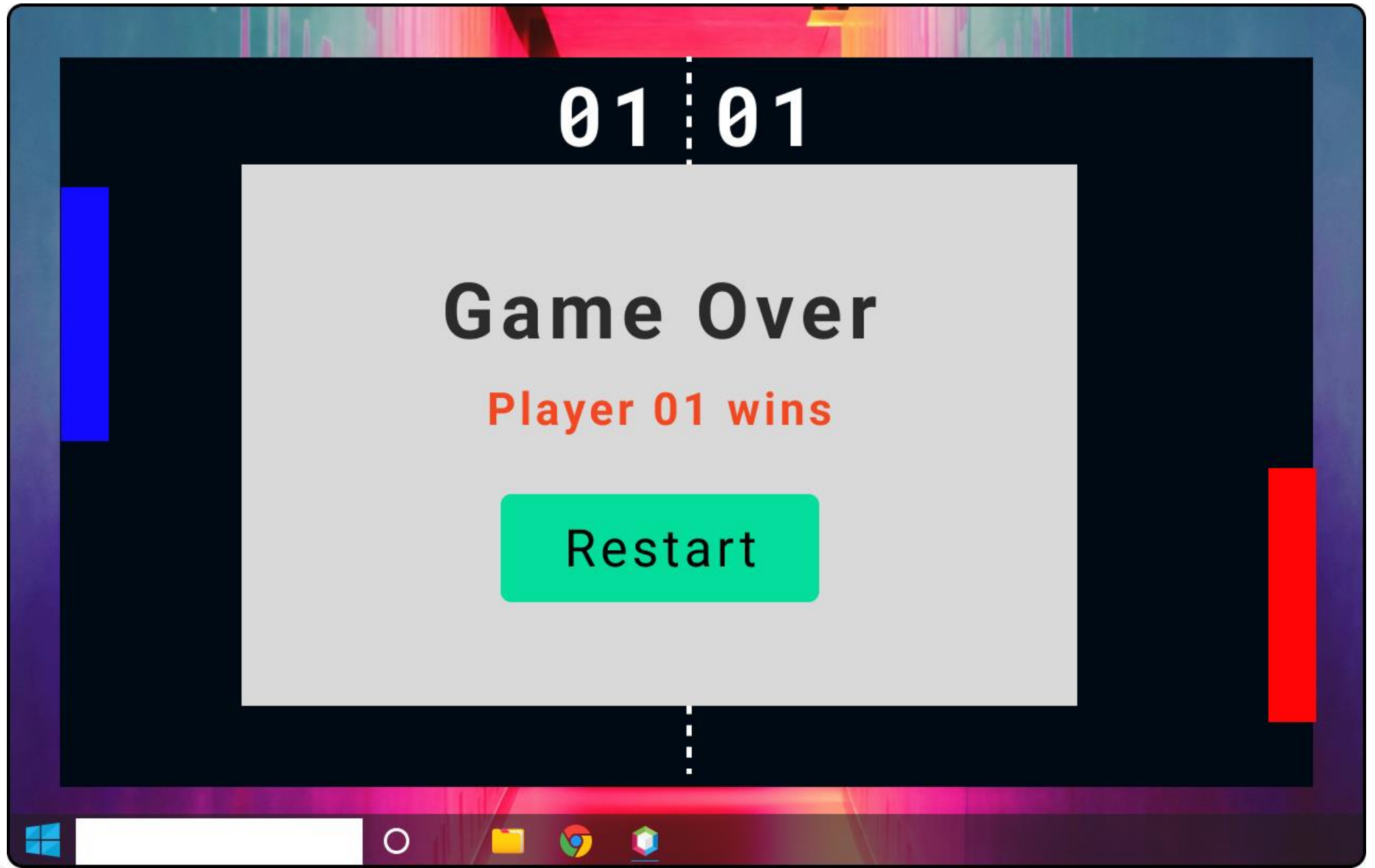# Visiual 01.

Visiual 02.

Visiual 03.

Visiual 04.

Visiual 05.
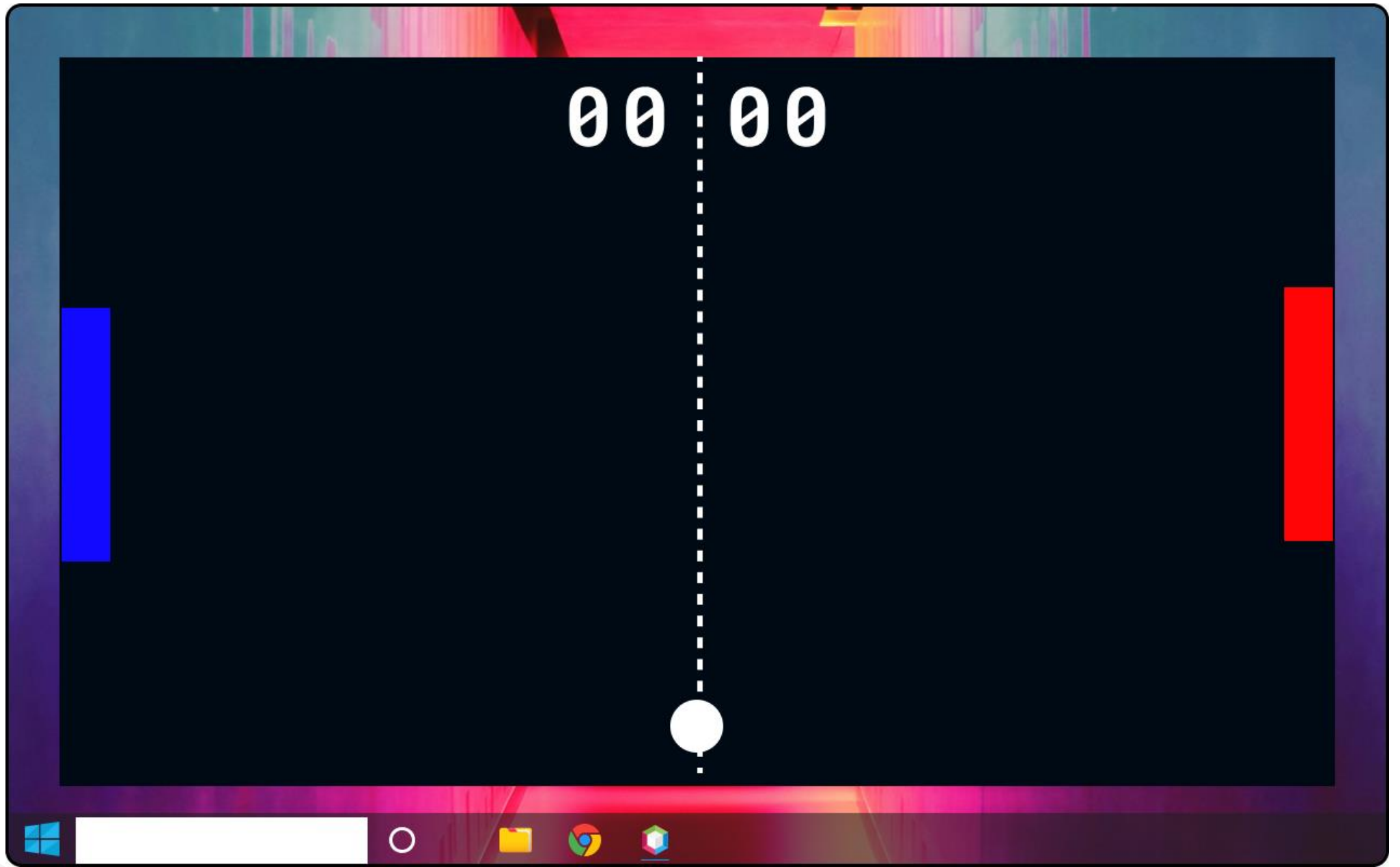
Visiual 06.

Qualative Research ?

We framed questions and interviewed 8-10 persons, the interview process helped us to understand user problem during devolopment.

01   Is the game too easy or too difficult?

02   Are the controls easy to understand?

03   Does the game feel fun and engaging?

04   Do you like the game's visual design?

05   Does the game feel competitive enough?

06   Are the sound effects and background music enjoyable?

Qualative Answer

The interview provided us with these answers, which helped us better determine the user's needs.

01.Add difficulty levels (Easy, Medium, Hard).

02.Provide a simple tutorial and allow players to customize control settings.

03..Add power-ups, new game modes, and challenges to enhance engagement.

04.Update the color scheme, background, and animations based on player preferences.

05.Add leaderboards, multiplayer options, and achievements.

06.Improve sound effects, offer background music choices, and allow volume control.

Note: Download the **'Qualitative Research Questions'** for more information.

Problem Statement & Solution

❌ Ball passes through the paddle.

❌ Paddle moves out of bounds.

❌ Score does not update correctly.

❌ Game does not end when a player reaches the maximum score.

❌ Ball always starts at the same position.

✔️ Use collision detection with Rectangle and adjust the ball's direction upon collision

✔️ Limit paddle movement to the screen's height.

✔️ Increment the correct player's score when the ball crosses their respective boundary.

✔️ Check if either player has reached MAX_SCORE and stop the game, then display a Game Over screen.

✔️ Randomize the ball's initial position and direction.

Note: Download the "**Problem statements with their corresponding Solutions**" for more information.

Future Improvement & Idea.

Add Sound Effects

What: Add sounds when the ball hits a paddle or wall, or when a player scores.

Why: Makes the game more fun and immersive.

Create AI for Single Player

What: Add a computer-controlled opponent for solo players.

Why: Allows people to play alone when no one else is around.

Improve Graphics

What: Make the ball move smoother and add small visual effects (e.g., when the ball hits something).

Why: Makes the game look nicer and feel more polished.

Add Game Modes

What: Add modes like time limits or harder challenges (e.g., the ball speeds up after each point).

Why: Adds variety to the game and makes it more interesting.

Online Multiplayer

What: Let players play against each other over the internet.

Why: Makes the game more fun and gives people a way to play with friends remotely.

Conclusion

Thank You For Watching.