

## Week 1 Milestone

### Section I: Cover Page

**Title:** Uno Game Project

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**Github Repo:-**

<https://github.com/sfsu-csc-667-fall-2024-roberts/term-project-team-dj-s>

Milestone	Date Submitted
M1	18/09/2024

## **Introduction.**

This milestone describes the objectives and elements of the Uno game project which is an online card game that can support several players. The project shall also cover low-fidelity wireframes, which are design drafts to be used in the creation of the web application's interface.

### **1. Project Objectives**

- To design and develop a working online version of the Uno game that several players can play concurrently.
- Game mechanism that matches the official Uno game rules is designed to make everything effortless for the users.
- To create an intuitive interface that would allow easy gameplay and hand management for the players of Uno.

### **2. User Profiles:**

- Let players sign in, create accounts, and out the systems whenever they wish.

## UNO GAME SIGN IN

- Create a screen with all active Games where players can pick already existing ones or go create new ones.

## UNO LOBBY SCREEN

Create new Game

### Active Games List

1. Game ID: 1234| Players: 3/4

Join now

2. Game ID: 5678| Players: 2/4

Join now

3. Game ID: 9101| Players: 4/4

Join now

- Create a game screen with information about existing players in the game and their current status.

## UNO GAME ROOM

Current Player: Player 1

Player 1: Ready

Player 2: Waiting

Player 3: Ready

Player 4: Not Joined

Start Game

- Create a game screen where players will have their hands up and on pile the discard pile and on draw pile.

## UNO GAME SCREEN

DiscardPile: [ Red 5 ]

DrawPile: Draw Card

PlayerHands:

Player1: [ Red 3 ][ Green 2 ][ Blue 1 ]

Player2: [ Yellow 4 ][ Red Skip ]

Player3: [ Green 9 ][ Wild ]

Player4: [ Blue 5 ][ Yellow 2 ]

Play Card

Draw Card

- Inform the players as to their respective turns and what action they can perform, whether it is playing a card or picking one from the pile.

## UNO GAME SCREEN

Current Turn: Player 2

You can:

- Play a card that matches the top card.
- Draw a card from the draw pile.

Discard Pile: [ Red 5 ]

Draw Pile: [ Draw Card ]

Player Hands:

Player 1: [ Red 3 ] [ Green 2 ] [ Blue 1 ]

Player 2: [ Yellow 4 ] [ Red Skip ]

Player 3: [ Green 9 ] [ Wild ]

Player 4: [ Blue 5 ] [ Yellow 2 ]

Play Card

Draw Card

- Two cards laid down defining the game are a player's action this matches with the top card of the discard pile for players implementing standard Uno rules including Players can have several special cards namely Skip, Reverse, Draw Two, Wild, and Wild Draw Four Cards that shape up the game.

## SPECIAL CARD ACTIONS

### Available Special Cards

- Skip: Next player loses turn.
- Reverse: Changes the direction of play.
- Draw Two: Next player draws two cards.
- Wild: Change the current color.
- Wild Draw Four: Change the color and force next player to draw four cards.

- Shouting out loud Uno is the requirement when a player is left only one card after winning.

## UNO NOTIFICATION

**\*\*ALERT!\*\***

Player 1: You have only one card left!

Shout "UNO!" to avoid drawing two penalty cards!

### 3. Real-Time Gameplay:

Web sockets are used for the real-time communication needed to carry out multiplayer interactions.

#### 4. End Game Conditions:

Specify conditions under which a player has won and ascertain the final points.

#### 5. Responsive Design:

Make sure that the game screen is responsive and adapts to different screen resolutions- desktop, tablets, and mobile phones.

#### 6. Technologies

The following technologies will be used in the development of the Uno game:

**Render:** For deployment and hosting of the application .

**Node.js:** As the server-side JavaScript runtime environment .

**Express.js:** For server-side routing and middleware management.

**PostgreSQL:** For user data and game state controlling.

**Socket.IO:** For synchronous interactions between server and clients .

**React:** For the design of a graphical user interface.

#### 7. Wireframes

Low-fidelity wireframes will be created for the following screens:

- Login/Register Screen:

For new users, it is possible to register a new account or for existing users, login to their already created account

## Sign up form

Sign up

By signing up, you agree to our Terms of Service  
and Privacy Policy.

## Login

Login

- Lobby Screen:

Allows viewing of games in progress, provision for starting a new game, and avenues for joining available games.

### UNO LOBBY SCREEN

Create New Game

#### Ongoing Games List

1. Game ID: 1234  Players: 3/4	Join now
2. Game ID: 5678  Players: 2/4	Join now
3. Game ID: 9101  Players: 4/4	Join now

- Game Room:

Represents players? Hands, the active player, the discards pile, and buttons for making moves or drawing cards from the deck.

### UNO GAME ROOM

Current Player: Player 1

Discard Pile: [ Red 5 ]

Player Hands:

Player 1: [ Red 3 ] [ Green 2 ] [ Blue 1 ]

Player 2: [ Yellow 4 ] [ Red Skip ]

Player 3: [ Green 9 ] [ Wild ]

Player 4: [ Blue 5 ] [ Yellow 2 ]

Play Card

Draw Card



- Game Over Screen:

Shows the results of the games, including the winner and the final scores of all players.

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**GAME OVER SCREEN**

**Winner: Player 2**

Final Scores:

Player 1: 20 points

Player 2: 50 points

Player 3: 10 points

Player 4: 15 points

**Play Again**

**Return to Lobby**

## 8. Example Wireframe Description

- Login Screen:

Fields for entering a username and a password.

Buttons for “Sign In” and “Sign up for free”.

- Lobby Screen:

Show a number of the games that are currently played.

Push button called “Start Game”.

- Game Room:

Screen focusing on the player’s hand of the character they play with.

Screen indicating the current top of the discard pile and the top of the draw pile.

Push buttons marked “Place a Card” and “Take a Card” respectively.

- Game Over Screen:

The screen shows the winning player and how many points got at the end of the game.

Button that is used to go back to lobby.