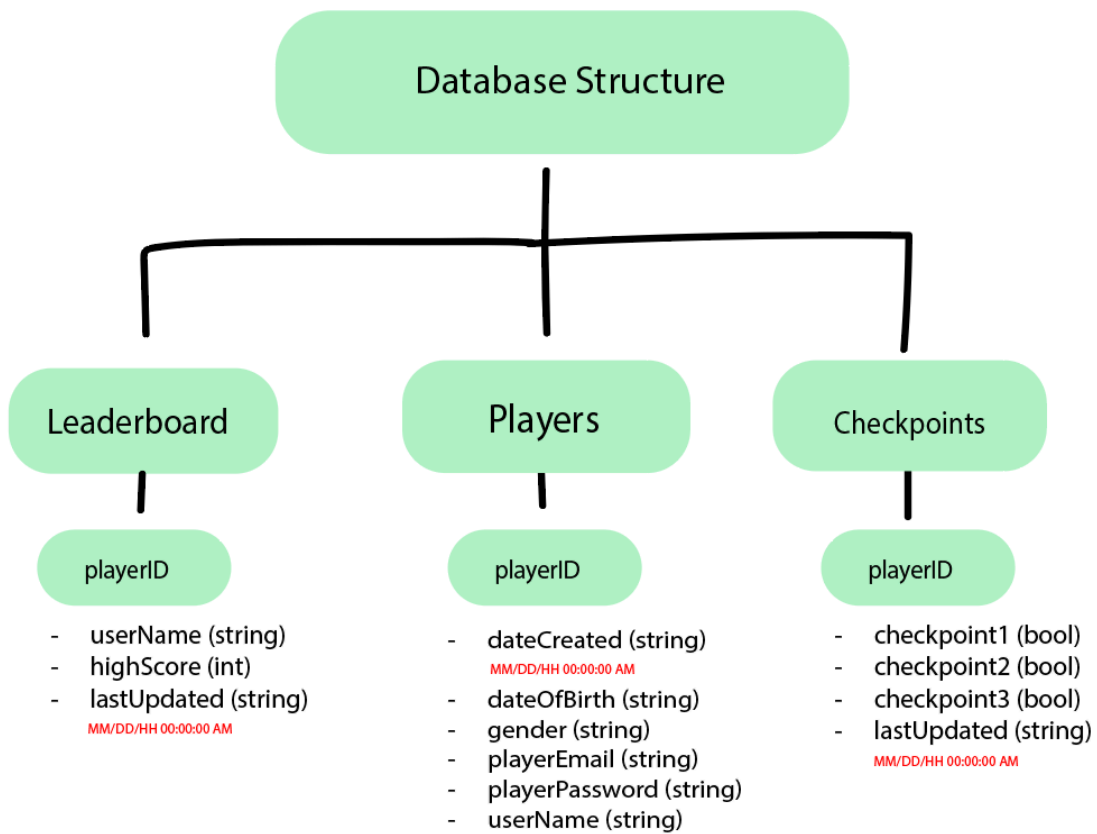




MotherNature ReadMe

Database Structure and Type usage



userID

- User UID generated from Authentication Service

Search by email address, phone number, or user UID					Add user	↺	⋮
Identifier	Providers	Created ↓	Signed In	User UID			
auuugh@gmail.com	✉	Jan 30, 2024	Jan 30, 2024	MOIQaQHEY0gLF8Jcfxu0OpK...			
nook@gmail.com	✉	Jan 30, 2024	Jan 31, 2024	UqQfKeRLvaUddutzhDL7cAY4...			
mikezawowski@gnqil.c...	✉	Jan 29, 2024	Jan 29, 2024	IoMUvrxKi5MMUWTqch0rmA...			
tomnook@gmail.com	✉	Jan 29, 2024	Jan 29, 2024	H4KaLIMdlPckGihZLpp9gxIR...			

Players

userName(string)

- Holds the player's username, string used since usernames may contain a combination of letters, numbers
- Restrictions to player username include

```
public bool IsValidUsername(string username)
{
    // Rule 1: Check Length
    if (username.Length < 3 || username.Length > 20)
    {
        errorMessageText.text = $"Username {username} invalid: Needs to be > 3 characters and less than 20.";
        return false;
    }

    // Rule 2: Character Restrictions
    Regex validUsernamePattern = new Regex(@"^[a-zA-Z0-9_]+$");
    if (!validUsernamePattern.IsMatch(username))
    {
        errorMessageText.text = $"Username {username} invalid: Special characters not allowed.";
        return false;
    }

    // Rule 3: Content Restrictions
    string[] disallowedNames = { "admin", "moderator", "support" };
    foreach (string name in disallowedNames)
    {
        if (username.ToLowerInvariant().Contains(name))
        {
            errorMessageText.text = $"Username {username} invalid: Contains disallowed name.";
            return false;
        }
    }

    return true; // Username is valid
}
```

gender(string)

- Dropdown menu in game for "male" or "female", maybe another one for animals or even aliens

playerEmail(string)

- Stores the player's email, string used as email address may contain combination of letters and numbers

playerPassword(string)

- Stores the player's password, string used as email address may contain combination of letters, numbers, symbol

dateOfBirth(string)

- Stores the player's date of birth, string used for date format DD/MM/YY
- During authentication, player has to input in this format or they will receive an error message while signing up

```
private bool IsValidDobFormat(string dob)
{
    // Regular expression to match the DD/MM/YY format
    Regex dobFormatRegex = new Regex(@"^(0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[012])/d{2}$");
    return dobFormatRegex.IsMatch(dob);
}
```

dateCreated(string)

- Uses system date time to convert into a string to store date and time when account is created

```

Player newPlayer = new Player
{
    userName = userName,
    playerEmail = email,
    playerPassword = password,
    dateOfBirth = dob,
    gender = gender,
    dateCreated = System.DateTime.Now.ToString("dd/MM/yyyy HH:mm:ss")
};

```

Leaderboard

highScore(int)

- Records the player's highest score achieved in the mini game, integer data type is used since scoring are in numerical values without decimal points and can be used to compare with other scores within the database for leaderboard purposes

lastUpdated(string)

- Uses system date time to convert into a string to store date and time when DB is updated

```

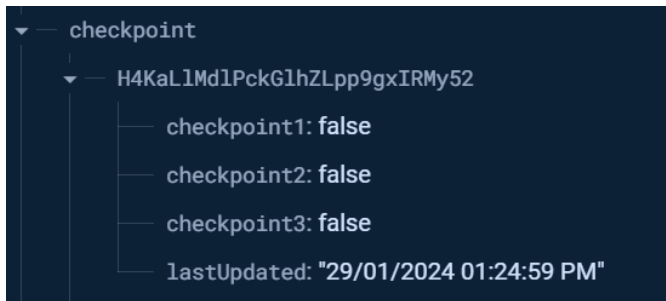
Leaderboard newLeaderboard = new Leaderboard
{
    userName = userName,
    highScore = 0,
    lastUpdated = System.DateTime.Now.ToString("dd/MM/yyyy HH:mm:ss")
};

```

Checkpoint

Checkpoint1/2/3 (bool)

- Indicates whether a player has reached certain checkpoints, bool data type is ideal for this as it represents when a player reached a checkpoint (true) or has not reached (false).



lastUpdated(string)

- Uses system date time to convert into a string to store date and time when DB is updated

Content Displayed in Game Authentication Service

The image displays two side-by-side authentication service screens with a teal background and a light blue border. Each screen has a back arrow icon in the top left corner and a close button (X) in the top right corner.

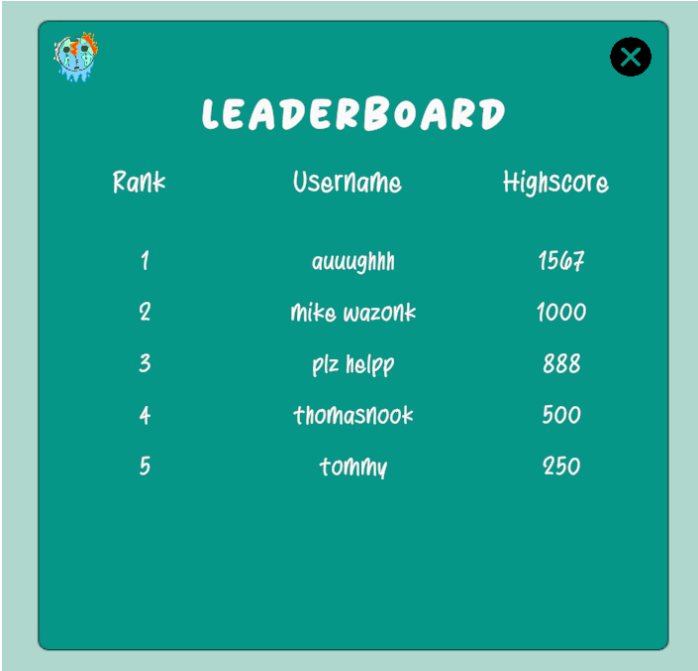
REGISTER Screen:

- Email:** Input field with placeholder text "Enter Email:"
- Username:** Input field with placeholder text "Enter Username:"
- Password:** Input field with placeholder text "Enter Password:"
- Gender:** Dropdown menu with "Male" selected and a downward arrow icon.
- D.O.B:** Input field with placeholder text "Enter Date Of Birth:"
- Sign Up:** A light blue button at the bottom.

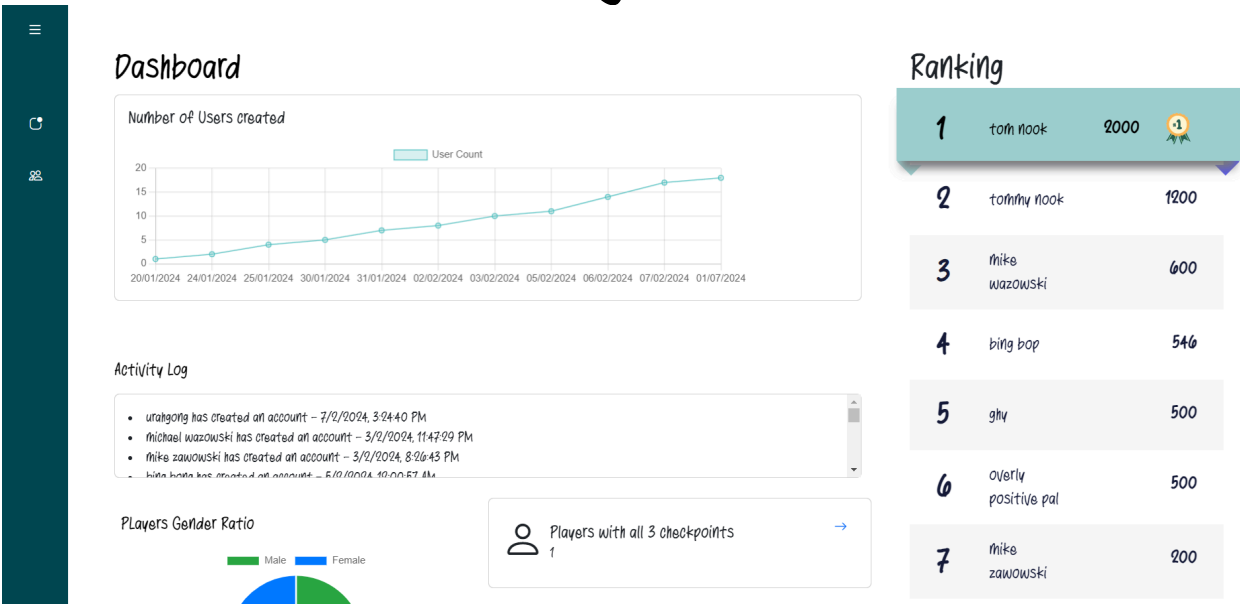
SIGN IN Screen:

- Email:** Input field with placeholder text "Enter Email:"
- Password:** Input field with placeholder text "Enter Password:"
- Sign In:** A light blue button at the bottom.

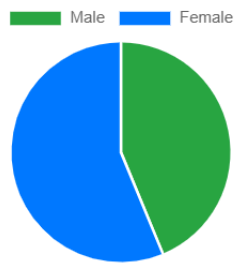
Authentication Service



Content Displayed in website



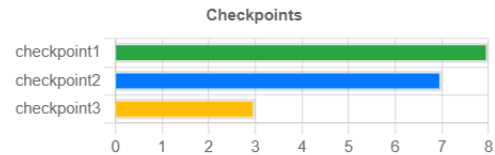
Players Gender Ratio



Players with all 3 checkpoints
1



Players Per Checkpoint



Dashboard

- Displays number of users created over time on a line chart
- Leaderboard ranking
- Activity log to track when a user creates an account, reaches checkpoint, gets new highscore
- Displays the number of players who reached all 3 checkpoints (completed the game) in a card
- Ratio of gender among players in pie chart
- Display number of users at each checkpoint on a bar graph

Players

- Display a list of players and their details within a table
- Click on a row in the table to view images they have taken within the VR game in scene 3 through firebase storage
- Create a new user through the signup form

Sidebar



Players

New Player

Email

Password

Username

Date of Birth



Gender



Create User

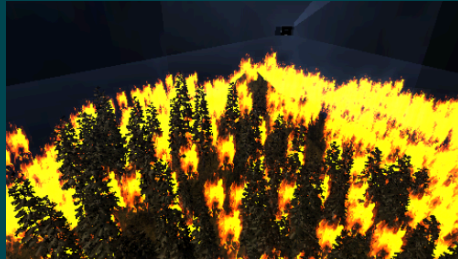
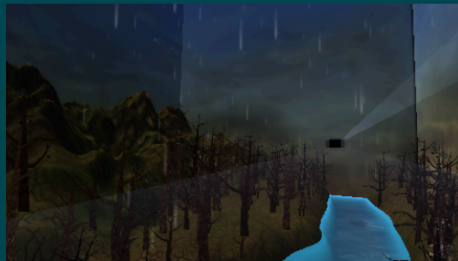
Players

New Player

Players

User ID	Username	Email	Date Of Birth	Gender
5lGN6tMpMveCprer8...	dewwwsha	dewwwsha@gmail.com	11/04/03	Female
6iurXjSyE7MATJUMYG...	bing bop	bingbop@gmail.com	2003-06-14	Female
8w7FfbZZeSRJHBQs...	ghy	nirhzama@vn.cpk	10/06/24	Male
9ysFtTP2hrObsUakH...	tommy nook	tommynook@gmail.c...	2002-01-25	Male
G9ze14fSlgE5gUPhg5...	tom nook	tomnook@gmail.com	2002-01-17	Male

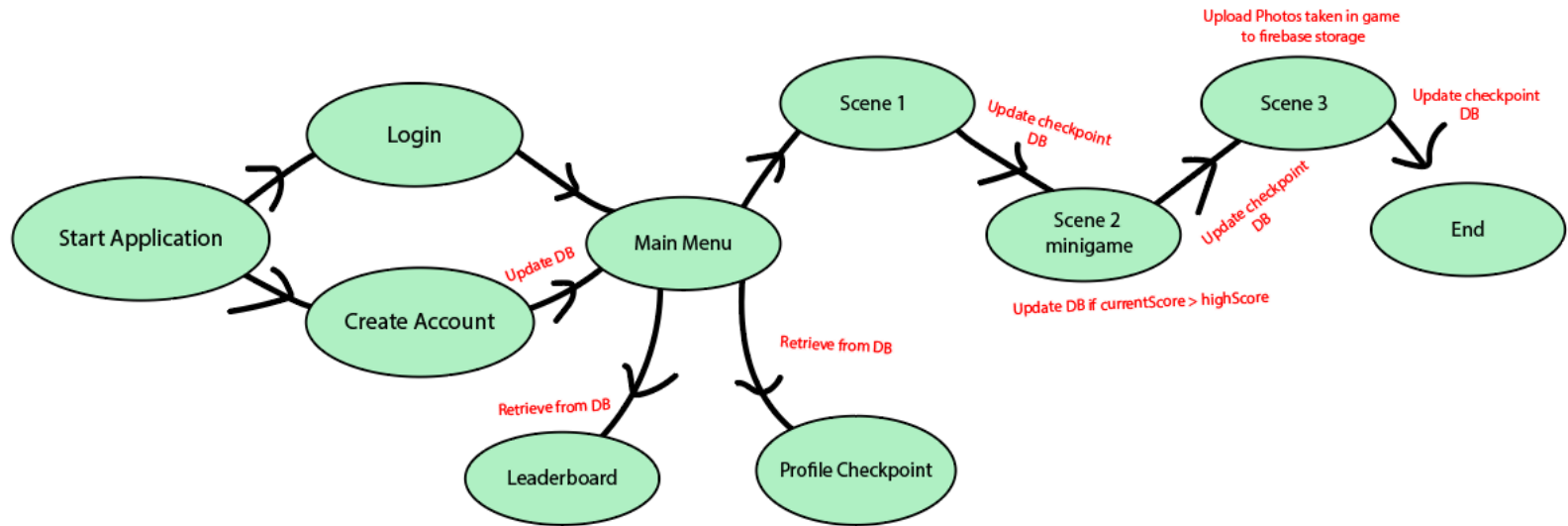
Player Images



Player Images

No images found for this user.

User Flow



Credits and References

Assets used

<https://assetstore.unity.com/packages/3d/vegetation/trees/conifers-botd-142076>

<https://assetstore.unity.com/packages/3d/vegetation/trees/mobile-tree-package-18866>

https://www.flaticon.com/free-icon/house_619032?related_id=618911&origin=search

https://www.flaticon.com/free-icon/recycle-symbol_1327264?related_id=1327366&origin=search

[Camera - Free technology icons](#)

[igin=search&related_id=9131549](#)

<https://pixabay.com/sound-effects/search/photo/>

<https://pixabay.com/sound-effects/>

[Free UI Click Sound Pack | Audio Sound FX | Unity Asset Store](#)

[Close free icons designed by Nazibuddoula Nayeem](#)

[Leaderboard free icons designed by Freepik](#)

[Play Buttton free icons designed by IYAHICON](#)

[User free icons designed by Md Tanvirul Haque](#)

and some code from my man chatgpt 😊