

# Architecture design and Software structure Report

## Introduction-

Catchy Fishes is a multiplayer game in which multiple clients are connected to one server and that server is connected to a database.

All of this is done using REST API ,express and mongo DB

## Design and implementation

### 2.1 The Rest API specifications

The REST api we are going to be supporting are basic GET PUT POST DELETE , 4 operations. GET further includes getting only specific customer or all customers

PUT needs a query param with ID of the customer we are going to be updating

POST will have a BODY with all the customer details to be inserted into the DataBase

DELETE will have a query param with ID of the user to delete

### 2.2 Database schemas and Structure

In This particular scenario we are only going to have a single Collection with multiple (maybe 2) sub schema

Main collection schema will include Name, Address, phone Number, Carrier type, date of birth.

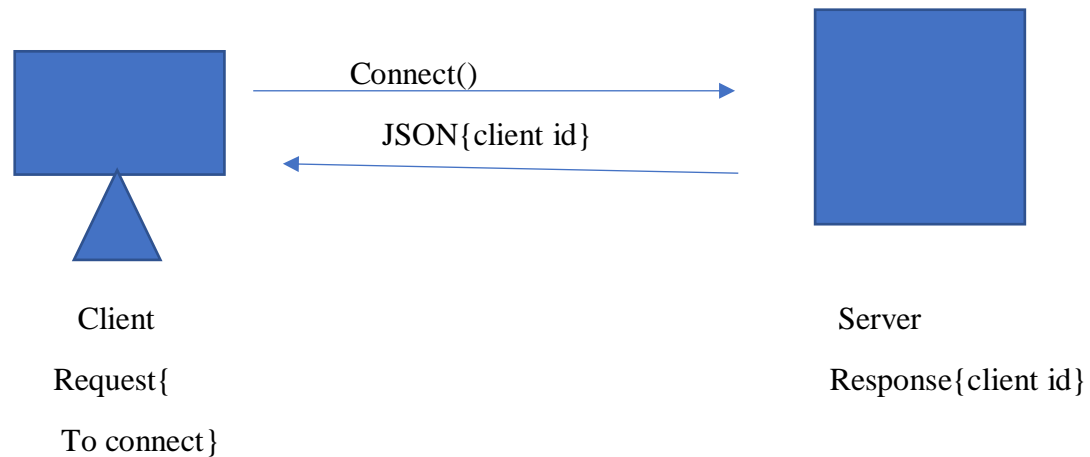
The Address will be a subschema with the following details, Address, street, state and country

The phone Schema will contain , primary ph number, secondary ph number and ph type (work/personal)

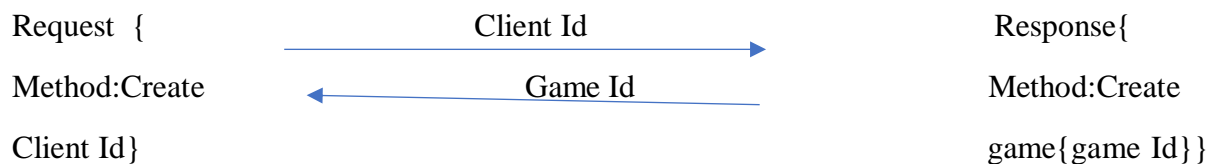
## 2.3 Communication

The communication from front-end to back-end and viceversa would be through simple REST API JSON objects.

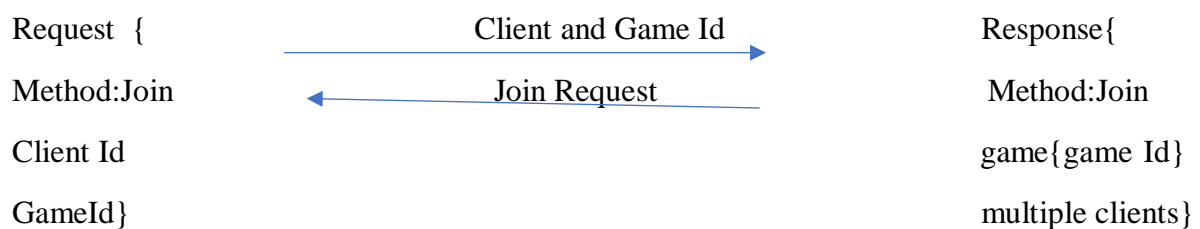
### 1)Connect to Server-



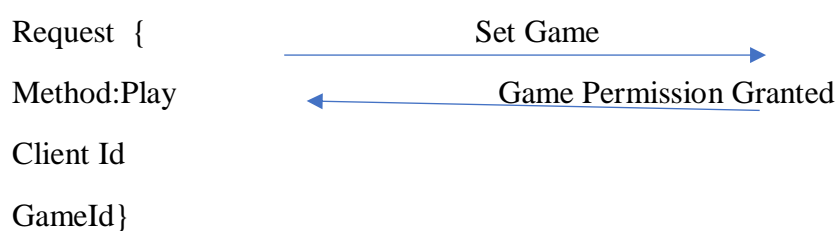
### 2)Create game and get game code



### 3)After getting game code join request for other players

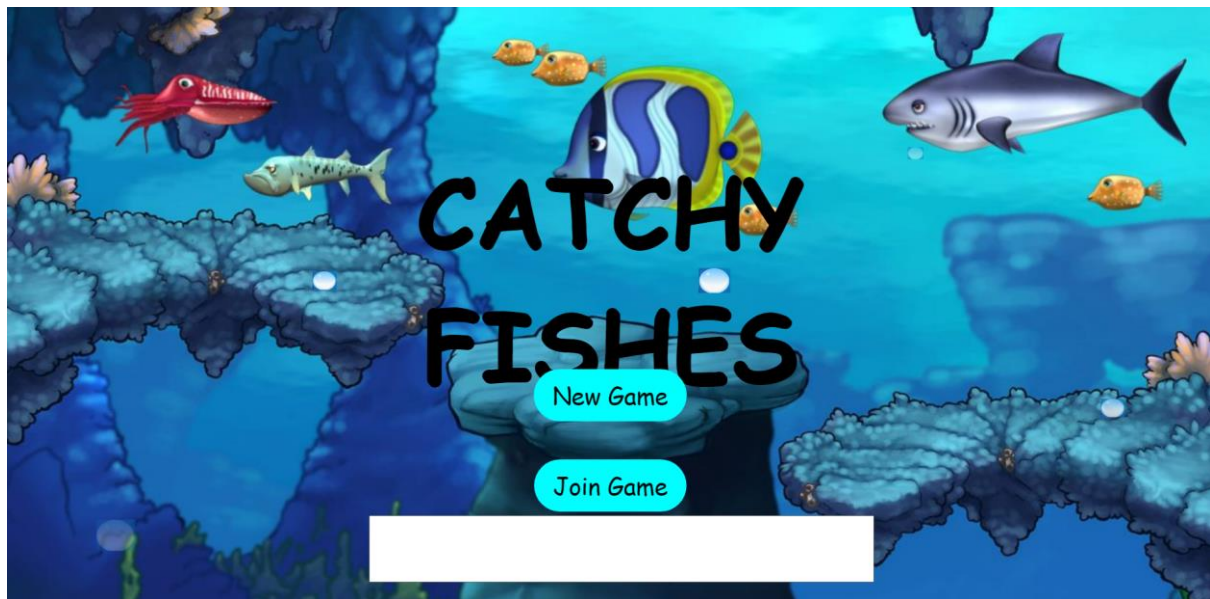


### 4)Play the game

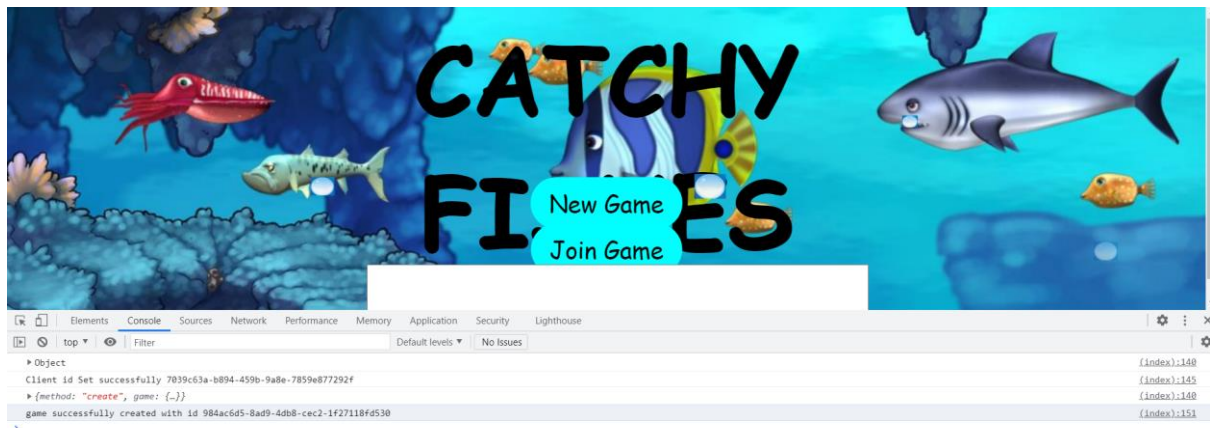


## Screenshots-

### The Game Window

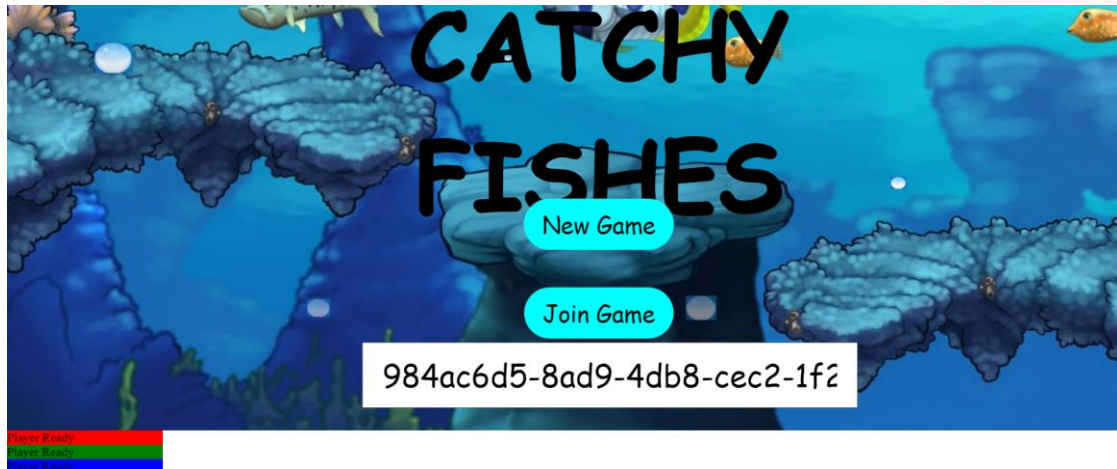


When Player click on New Game a request is generated and game id is created



## Player Lobby

On typing the game ID you wait for other players to join



## After all players join Game Continue



**Score Updated as you play the game**



### **3. Conclusion**

In Conclusion this will be a very well rounded Project to learn a product as an whole, understanding its presentation layer(frontend), business layer(backend) and data layer(database)

### **4. References**

Mostly personal experiences and coursera

Github link- <https://github.com/Satwik0103/Web-Development/tree/main/MultiplayerGame>