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# PlayerService

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## Project Structure

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```
PlayerService/
├── Controllers/
│   └── PlayerController.cs    # Handles HTTP requests for player-related
operations
├── Models/
│   └── Player.cs             # Represents the Player entity
├── Services/
│   ├── IPlayerService.cs     # Defines the player service interface
│   └── PlayerService.cs      # Implements the player service, handles business
logic
├── Repositories/
│   ├── IPlayerRepository.cs  # Defines the repository interface for data
access
│   └── PlayerRepository.cs    # Implements the repository, interacts with Redis
```

## Features

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- **Player Creation:**
  - Players can be created via a REST API.
  - A player can be assigned a name, or a unique identifier will be generated if no name is provided.
  - Validates the uniqueness of player names; if a name already exists, a **400 BadRequest** is returned with an appropriate error message.
- **Player Retrieval:**
  - Fetches the list of all created players from Redis.

- Player data is persisted in Redis to ensure it remains available across multiple sessions.

# API Endpoints

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## 1. Create a Player

- **URL** : `POST /api/player`
- **Description** : Creates a new player with an optional name.
- **Request Parameters** :
- `playerName` (query string, optional): The name of the player. If not provided, a unique name will be generated.
- **Response** :
- `200 OK`: Player successfully created.
- `400 BadRequest`: If the `playerName` is already taken.

**Example Request** (with player name):

```
curl -X POST "https://localhost:7008/api/player?playerName=Mehran"
```

**Example Request** (without player name):

```
curl -X POST "https://localhost:7008/api/player"
```

**Example Response** (success):

```
{
  "id": "1635de3b-1883-40da-a34e-ceffd6fa321b",
  "name": "Mehran"
}
```

**Example Response** (error - name already taken):

```
{
  "message": "The player name is already taken."
}
```

## 2. Get All Players

- **URL** : **GET** /api/player
- **Description** : Fetches the list of all players.
- **Response** : **200 OK** with a list of players.

### Example Request :

```
curl -X GET "https://localhost:7008/api/player"
```

```
[
  {
    "id": "a18a4ce4-00f0-4721-a79f-c0c507e25005",
    "name": "SW0HxegCUd"
  },
  {
    "id": "37014d01-0098-45a7-987e-49250d2774e6",
    "name": "mehran2"
  },
  {
    "id": "d2a56739-8605-4e6b-af93-1f78a747c419",
    "name": "GZR1W5xfkt"
  },
  {
    "id": "3d9c0cad-01d0-4aa2-bd8e-1fc72285f7d7",
    "name": "te+mFFVe+k"
  },
  {
    "id": "1af19130-5f87-424d-aa06-7a2500d8ed11",
    "name": "y3vlzRIItBs"
  },
  {
    "id": "49fc12c1-0536-4488-a757-eeaca67d1fbd",
    "name": "PsaIRQUP7W"
  },
  {
    "id": "4a8684a4-8d20-4896-96ef-5e751616c77b",
    "name": "mehran"
  }
]
```