

Black-Jack endpoints

1. Authentication Endpoints

1.1 Register :

- Creates a new user account, hashes password, generates and emails an OTP for verification.
- **POST** <http://127.0.0.1:5000/auth/register>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{
  "username": "string",
  "password": "string",
  "email": "string"
}
```
- **RESPONSES**
 - **201** (Created) - {
 "msg": "User registered successfully. An OTP has been sent to your email for verification.",
 "user_id": 123,
 "balance": 1000
}
 - **400** (Bad Request) - can be caused by
 - missing required fields e.g email, password, username.
 - Invalid email , Weak password or duplicated username
 - **500** Internal server error

1.2 Verify Email :

- Confirms OTP code sent at registration and marks email as verified.
- **POST** <http://127.0.0.1:5000/auth/verify-email>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{
  "user_id": 123,
  "otp": "123456"
}
```
- **RESPONSES**

- **201** (OK, already verified or verification success) - { "msg": "Email verified successfully" }
- **400** (Bad Request) - can be caused by
 - missing user id or otp
 - Invalid user ID or otp
- **500** Internal server error

1.3 Login :

- Authenticates credentials, verifies email is confirmed, and returns a JWT access token.
- **OPTIONS** <http://127.0.0.1:5000/auth/login> // CORS preflight
- **POST** <http://127.0.0.1:5000/auth/login>
- **HEADER** : Content-Type: application/json

- **REQUEST BODY:**

```
{
  "username": "string",
  "password": "string",
}
```

- **RESPONSES**

- **201** (ok) - {


```
"access_token": "jwt_token",
"user_id": 123,
"username": "alice"
```
- **400** (Bad Request) - can be caused by
 - missing required fields password, username.
- **401** (Unauthorized) - can be caused by
 - Invalid credentials
 - Unverified email
- **500** Internal server error

1.4 Logout :

- Revokes the user's JWT (even if expired) and cleans up any in-progress games.
- **POST** <http://127.0.0.1:5000/auth/logout>
- **HEADER** :Authorization: Bearer <token>
- **RESPONSES**
 - **200** (ok) - {


```
"msg": ""Successfully logged out"
```

- **400** (Bad Request) - can be caused by
 - missing or malformed authorization header
 - Invalid token or invalid token payload
- **500** Internal server error

1.5 Check user name :

- Check Username Availability, since duplicated username are not allowed. Returns if username is available
- **POST** <http://127.0.0.1:5000/auth/check-username>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{
  "username": "string",
}
```
- **RESPONSES**
 - **200** (Available) -


```
{ "available": true, "msg": "Username is available" }
```
 - **200** (unavailable) -


```
{ "available": false, "msg": "Username is already exist" }
```
 - **400** (Bad Request) - can be caused by
 - missing username.
 - **500** Internal server error

2. Single Player Game Endpoints

2.1 start-game :

- Deducts a bet, deals initial cards, and creates a single-player Game and PlayerGame.
- **POST** <http://127.0.0.1:5000/game/start-game>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{
  "creator_user_id": 123,
  "bet_amount": 10 // optional; default 10
}
```
- **RESPONSES**
 - **201** (Created) -

```
{
  "msg": "Game started",
  "game": { ... },
  "player_game": { ... },
  "player_hand": [...],
  "dealer_hand": [..., "facedown"],
  "new_balance": 990
}
```

- **400** (Bad Request) - can be caused by
 - missing creator user id, or user not found
 - Insufficient balance.
 - Invalid email , Weak password or duplicated username
- **500** Internal server error

2.2 single player hit :

- Deducts a bet, deals initial cards, and creates a single-player Game and PlayerGame.
- **POST** <http://127.0.0.1:5000/game/hit>
- **HEADER** : Content-Type: application/json

- **REQUEST BODY:**

```
{ "game_id": 1, "user_id": 123 }
```

- **RESPONSES**

- **200** (ok) -


```
{
  "msg": "Hit action processed",
  "player_game": { ... },
  "game_state": "playing|"completed",
  "dealer_hand": [ ... ]
}
```
- **400** (Bad Request) - can be caused by
 - Missing game id or user id
 - Invalid state to make hit
 - Player bust
 - Game not found
 - Player not found in game
- **500** Internal server error

2.3 single player stand :

- Player stands; reveals dealer's hand, computes outcome, updates balance.
- **POST** <http://127.0.0.1:5000/game/stand>

- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1, "user_id": 123 }
```
- **RESPONSES**
 - **200** (ok) -

```
{
  "msg": "Stand action processed, game over",
  "game_state": "completed",
  "player_game": { ... },
  "dealer_hand": [ ... ],
  "payout": 20,
  "coins_won": 10,
  "new_balance": 1010
}
```
 - **400** (Bad Request) - can be caused by
 - Missing game id or user id
 - Invalid state to make hit
 - Player bust
 - Game not found
 - Player not found in game
 - **500** Internal server error

3. Multi Player Game Endpoints

3.1 create table :

- Creates a new waiting-state multiplayer game with a unique table name.
- **POST** <http://127.0.0.1:5000/game/create-table>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "host_user_id": 123, "table_name": "test_name" }
```
- **RESPONSES**
 - **201** (Created) -

```
{
  "msg": "Table created",
  "game": { ... },
}
```
 - **400** (Bad Request) - can be caused by

- missing creator host user id, or table name
 - Duplicated active game
- **500** Internal server error

3.2 List active games :

- Returns all waiting/betting tables with fewer than 7 players.
- **POST** <http://127.0.0.1:5000/game/active-gmaes>
- **RESPONSES**
 - **200** (ok with active games list or none if no active game) -
 1. {


```
"msg": "Active multiplayer games retrieved",
"active_games": [
  {
    "game_id": 1,
    "host_user_id": 123,
    "players_joined": 3,
    "game_state": "waiting",
    "table_name": "test_game"
  },
  ...
]
}
```
 2. { "msg": "No active multiplayer games available. Create your own table!" }

3.3 Join game :

- Joining multiplayer game, Deducts the bet, adds the user to an existing table.
- **POST** <http://127.0.0.1:5000/game/join-game>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1, "user_id": 123 , "bet_amount" : 10}
```
- **RESPONSES**
 - **201** (ok) -


```
{
  "msg": "Joined game successfully",
  "player_game": { ... },
  "game_state": "waiting",
  "new_balance": 990
}
```
 - **400** (Bad Request) - can be caused by

- Missing game id or user id
 - Game table full (max is 7 player)
 - Insufficient balance
 - Game not found
 - Player not found
- **500** Internal server error

3.3 Start Round :

- Start multiplayer round, Deals two cards to each player, one face-up to dealer, sets turn order.
- **POST** <http://127.0.0.1:5000/game/start-round>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1 }
```
- **RESPONSES**
 - **200** (ok) -


```
{
    "msg": "Round started",
    "game": { ... },
    "dealer_hand": [card, "facedown"],
    "players_info": [
      { "user_id": 123, "player_hand": [..., ...] },
      ...
    ]
  }
```
 - **400** (Bad Request) - can be caused by
 - Missing game id
 - Game not found
 - Invalid state to start game
 - **500** Internal server error

3.4 Multiplayer player hit :

- Gives active player another card, rotates turn on bust.
- **POST** <http://127.0.0.1:5000/game/player-hit>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1, "user_id": 123 }
```
- **RESPONSES**

- **200** (ok) -


```
{
    "msg": "Card drawn",
    "player_game": { ... },
    "all_players_done": false,
    "next_active_user_id": 456
}
```
- **400** (Bad Request) - can be caused by
 - Missing game id or user id
 - Invalid state to make hit
 - Game not found
 - Player not found in game
- **500** Internal server error

3.5 Multi player stand :

- Player stands; reveals dealer's hand, computes outcome, updates balance.
- **POST** <http://127.0.0.1:5000/game/player-stand>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1, "user_id": 123 }
```
- **RESPONSES**
 - **200** (ok) -


```
{
    "msg": "Player stand processed",
    "player_game": { ... },
    "all_players_done": false,
    "next_active_user_id": 456
}
```
 - **400** (Bad Request) - can be caused by
 - Missing game id or user id
 - Invalid state to make stand
 - Game not found
 - Player not found in game
 - **500** Internal server error

3.6 Dealer Turn :

- After all players finish, reveals dealer hand, plays dealer logic, resolves all bets and side bets.
- **POST** <http://127.0.0.1:5000/game/dealer-turn>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1 }
```
- **RESPONSES**
 - **200** (ok) -

```
{
  "msg": "Dealer turn processed, game over",
  "game": { ...final game... },
  "player_results": [
    { "user_id": 123, "result": "player", "payout": 10, "new_balance": 1010 },
    ...
  ]
}
```
 - **400** (Bad Request) - can be caused by
 - Missing game id or user id
 - Not all player have finished their turn
 - **404** (not found) - can be caused by
 - Game not found
 - **500** Internal server error

4. Betting and utility game Endpoints

4.1 BET :

- Creates a new user account, hashes password, generates and emails an OTP for verification.
- **POST** <http://127.0.0.1:5000/game/place-bet>
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**

```
{
  "game_id": 1,
  "user_id": 123,
  "bet_amount": 20
}
```
- **RESPONSES**

- **200** (ok) -
 { ...game.to_dict()... }
- **404** (game not found)
 { "msg": "Game not found" }
- **500** Internal server error

4.2 Double down:

- At the first hit Doubles the player's stake, deals one card, ends turn.
- **GET** http://127.0.0.1:5000/auth/double-down
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**
 { "game_id": 1, "user_id": 123 }
- **RESPONSES**
 - **200** (OK) -
 {
 "msg": "Double down processed",
 "player_game": { ... },
 "player_hand": [...],
 "new_balance": 980
 }
 - **400** (Bad Request) - can be caused by
 - missing game id or user id
 - Turn already finished
 - Insufficient balance to double down
 - **404** not found
 - Game not found
 - Player not found

4.3 Split:

- Splits a pair into two hands, deducts an equal bet, deals extra cards only when player has two exact same cards.
- **GET** http://127.0.0.1:5000/game/spilit
- **HEADER** : Content-Type: application/json
- **REQUEST BODY:**
 { "game_id": 1, "user_id": 123 }
- **RESPONSES**
 - **200** (OK) -
 {
 "msg": "Split processed",
 "split_hands": [{...}, {...}],

```
"new_balance": 980
}
```

- **400** (Bad Request) - can be caused by
 - missing game id or user id
 - Invalid cards to split (not same number and rank exactly)
 - Insufficient funds
- **404** not found
 - Game not found
 - Player not found

4.4 Leave Game :

- Leave Multitplayer game. JWT-protected removal of a player; handles host reassignment or game termination if host leaves.
- **POST** http://127.0.0.1:5000/game/leave_game
- **HEADER** : Authorization: Bearer <token>
Content-Type: application/json
- **REQUEST BODY:**

```
{ "game_id": 1 }
```
- **RESPONSES**
 - **200** (ok) -{
"msg": "Successfully left the game",
"game_state": { ...updated state... }
}
 - **400** (Bad Request) - can be caused by
 - missing game id
 - User not in game
 - **404** (game not found)
 - **500** Internal server error

5. User Profiles

5.1 Get profile :

- **GET** http://127.0.0.1:5000/user/profile?user_id=<int>
- **HEADER** : Content-Type: application/json

- **RESPONSES**

- **200** (ok) -
 { ...user.to_dict()... }
- **400** (Bad request) - can be caused by user id missing
- **404** (Bad request) - user not found
- **500** Internal server error

5.2 Get user balance:

- **GET** http://127.0.0.1:5000/user/coins?user_id=<int>

- **RESPONSES**

- **200** (OK) -{
 "msg": "User balance retrieved successfully",
 "user_id": 123,
 "balance": 1000
}
- **400** (Bad Request) - can be caused by
 - user id
- **404** not found
 - user not found