



# **API Specification**

## **Event Booking App**

# Event Booking App - API Spec (REST Endpoint)

## 1/ Đăng nhập

- Endpoint: POST /api/auth/login
- Mô tả: Xác thực người dùng bằng email và mật khẩu, trả về JWT token.
- Validation Rules & Messages

Field	Rule	Message
email	Required, valid email	Email is required Invalid email format
password	Required	Password is required

### Ghi chú:

- Nếu chỉ 1 lỗi, errors chỉ chứa 1 phần tử.
- Nếu nhiều lỗi, trả về danh sách chi tiết.
- Tất cả lỗi validation trả về dạng:

```
{  
  "success": false,  
  "message": "Validation failed",  
  "errors": [  
    { "field": "FIELD_NAME", "message": "VALIDATION_MESSAGE" }  
  ]  
}
```

- Request Body

```
{  
  "email": "user@example.com",  
  "password": "password123"  
}
```

- Response - Thành công – 200 OK

```
{  
  "success": true,  
  "message": "Login successful",  
  "data": {  
    "accessToken": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",  
    "expire": "2025-07-31T23:59:59Z"
```

```

    }
  }
- Response — Validation Failed 422
{
  "success": false,
  "message": "Validation failed",
  "errors": [
    { "field": "email", "message": "Invalid email format" },
    { "field": "password", "message": "Password is required" }
  ]
}
- Response - Thất bại – 401 Unauthorized
{
  "success": false,
  "message": "Invalid email or password"
}

```

## 2. Đăng ký

- Endpoint: POST /api/auth/register
- Mô tả: Tạo tài khoản mới.
- Validation Rules & Messages

Field	Rule	Message
fullName	Required	Full name is required
email	Required, valid email, unique	Email is required Invalid email format Email is already registered
password	Required, min 8 chars, letters & numbers	Password is required Password must be at least 8 characters and contain letters and numbers

- Request Body

```

{
  "fullName": "Jane Doe",
  "email": "jane@example.com",
  "password": "password123"
}

```

```
}
```

- Response — Validation Failed 422

```
{
```

```
  "success": false,
```

```
  "message": "Validation failed",
```

```
  "errors": [
```

```
    { "field": "fullName", "message": "Full name is required" },
```

```
    { "field": "email", "message": "Invalid email format" },
```

```
    { "field": "password", "message": "Password must be at least 8 characters and contain  
letters and numbers" }
```

```
  ]
```

```
}
```

- Response - Thành công – 201 Created

```
{
```

```
  "success": true,
```

```
  "message": "Registration successful",
```

```
  "data": {
```

```
    "userId": 1,
```

```
    "fullName": "Jane Doe",
```

```
    "email": "jane@example.com"
```

```
  }
```

```
}
```

### 3. Quản lý sự kiện

#### a. Thêm sự kiện

- Endpoint: POST /api/events
- Mô tả: Tạo một sự kiện mới
- Validation Rules & Messages

Field	Rule	Message
title	Required	Title is required
dateTime	Required, ISO datetime, future	Date & Time is required Date & Time must be in the future
location	Required	Location is required
price	Required, number $\geq 0$	Price is required Price must be $\geq 0$
description	Optional, max 1000 chars	Description must be less than 1000 characters
imageUrl	Optional, valid URL	Invalid image URL

- Request Body

```
{
  "title": "Art Exhibition",
  "dateTime": "2025-05-12T10:00:00",
  "location": "Modern Art Gallery, New York",
  "price": 25.00,
  "description": "Lorem ipsum dolor sit amet...",
  "imageUrl": "https://cdn.example.com/events/art_exhibition.jpg"
}
```

- Response - Failed – 422

```
{
  "success": false,
  "message": "Validation failed",
  "errors": [
    { "field": "title", "message": "Title is required" },
    { "field": "price", "message": "Price must be  $\geq 0$ " }
  ]
}
```

- Response – 201 Created

```
{
```

```

"success": true,
"message": "Event created successfully",
"data": {
  "id": 123,
  "title": "Art Exhibition",
  "dateTime": "2025-05-12T10:00:00",
  "location": "Modern Art Gallery, New York",
  "price": 25.00,
  "description": "Lorem ipsum dolor sit amet...",
  "imageUrl": "https://cdn.example.com/events/art_exhibition.jpg"
}
}

```

#### b. Cập nhật sự kiện

- Endpoint: PUT /api/events/{id}
- Mô tả: Cập nhật thông tin sự kiện theo id
- Validation Rules & Messages: Giống với Thêm sự kiện, bổ sung

Field	Rule	Message
id (path)	Required, integer >0, exists	Event not found

- Request body
 

```

{
  "title": "Art Exhibition (Updated)",
  "dateTime": "2025-05-12T11:00:00",
  "location": "Modern Art Gallery, New York",
  "price": 30.00,
  "description": "Updated description",
  "imageUrl": "https://cdn.example.com/events/art_exhibition_updated.jpg"
}

```
- Response - Validation Failed – 422
 

```

{
  "success": false,
  "message": "Validation failed",
  "errors": [
    { "field": "dateTime", "message": "Date & Time must be in the future" }
  ]
}

```

```

]
}
- Response - Not Found – 404
{
  "success": false,
  "message": "Event not found"
}
- Response – 200 OK
{
  "success": true,
  "message": "Event updated successfully",
  "data": {
    "id": 123,
    "title": "Art Exhibition (Updated)",
    "dateTime": "2025-05-12T11:00:00",
    "location": "Modern Art Gallery, New York",
    "price": 30.00,
    "description": "Updated description",
    "imageUrl": "https://cdn.example.com/events/art_exhibition_updated.jpg"
  }
}

```

### c. Xoá sự kiện

- Endpoint: DELETE /api/events/{id}
- Mô tả: Xoá sự kiện theo id.
- Validation Rules & Messages

Field	Rule	Message
id (path)	Required, integer >0, exists	Event not found

- Response - Not Found – 404
 

```

{
  "success": false,
  "message": "Event not found"
}

```
- Response - 204 No Content

(no body)

#### Lưu ý bảo mật:

- Cả 3 endpoint yêu cầu JWT Token với quyền ADMIN.
- Response - Unauthorized – 401

```
{  
  "success": false,  
  "message": "Unauthorized – Please login"  
}
```

- Response - Forbidden – 403

```
{  
  "success": false,  
  "message": "Forbidden – You do not have permission to perform this action"  
}
```

#### d. Lấy danh sách sự kiện

- Endpoint: GET /api/events
- Mô tả: Lấy danh sách các sự kiện phổ biến, sắp diễn ra, hoặc theo địa điểm.
- Query Params

Param	Kiểu	Mô tả
type	string	popular / upcoming / nearby
search	string	Từ khoá tìm kiếm
page	int	Trang (mặc định: 1)
size	int	Số lượng trên trang (mặc định: 10)

- Validation Rules & Messages

Field	Rule	Message
type	Optional, in [popular, upcoming, nearby]	Invalid type value (nếu gửi sai)
page	Optional, integer $\geq 1$	Page must be a positive integer
size	Optional, integer $\geq 1$	Size must be a positive integer

- Response — Validation Failed 422

```
{  
  "success": false,  
  "message": "Validation failed",  
  "errors": [  

```



```
{ "field": "type", "message": "Invalid type value" },
{ "field": "page", "message": "Page must be a positive integer" },
{ "field": "size", "message": "Size must be a positive integer" }
]
}
```

- Response – 200 OK

```
{
  "success": true,
  "message": "Events fetched successfully",
  "data": [
    {
      "id": 101,
      "title": "Art Exhibition",
      "dateTime": "2025-05-12T10:00:00",
      "location": "Modern Art Gallery, New York",
      "price": 25.00,
      "description": "Lorem ipsum dolor sit amet...",
      "imageUrl": "https://cdn.example.com/events/art_exhibition.jpg"
    }
  ]
}
```

#### e. Chi tiết sự kiện

- Endpoint: GET /api/events/{id}
- Mô tả: Xem chi tiết sự kiện theo id.
- Validation Rules & Messages

Field	Rule	Message
id	Required, integer >0, exists	Event not found

- Response — Not Found 404

```
{
  "success": false,
  "message": "Event not found"
}
```

- Response – 200 OK

```
{
  "success": true,
  "message": "Event detail fetched successfully",
  "data": {
    "id": 101,
    "title": "Art Exhibition",
    "dateTime": "2025-05-12T10:00:00",
    "location": "Modern Art Gallery, New York",
    "price": 25.00,
    "description": "Lorem ipsum dolor sit amet...",
    "imageUrl": "https://cdn.example.com/events/art_exhibition.jpg"
  }
}
```

#### 4. Đặt vé

- Endpoint: POST /api/bookings
- Mô tả: Đặt vé cho sự kiện.
- Validation Rules & Messages

Field	Rule	Message
eventId	Required, integer >0, exists	Event is requiredEvent not found
quantity	Required, integer $\geq 1$	Quantity must be at least 1

- Request Body

```
{
  "eventId": 101,
  "quantity": 2
}
```

- Response — Validation Failed 422

```
{
  "success": false,
  "message": "Validation failed",
  "errors": [
    { "field": "eventId", "message": "Event not found" },
    { "field": "quantity", "message": "Quantity must be at least 1" }
  ]
}
```

```

}
- Response – 201 Created
{
  "success": true,
  "message": "Booking successful",
  "data": {
    "bookingId": 501,
    "event": {
      "id": 101,
      "title": "Art Exhibition",
      "dateTime": "2025-05-12T10:00:00",
      "location": "Modern Art Gallery, New York"
    },
    "quantity": 2,
    "totalPrice": 50.00
  }
}

```

## 5. Xem vé của tôi

- Endpoint: GET /api/tickets
- Mô tả: Lấy danh sách vé đã mua của người dùng.
- Validation Rules & Messages: Không có tham số → chỉ yêu cầu **JWT Token hợp lệ**
- Response — Unauthorized 401

```

{
  "success": false,
  "message": "Unauthorized – Please login to access this resource"
}

```

- Response – 200 OK

```

{
  "success": true,
  "message": "Tickets fetched successfully",
  "data": [
    {
      "ticketId": 1001,

```

```

    "event": {
      "id": 101,
      "title": "Art Exhibition",
      "dateTime": "2025-05-12T10:00:00",
      "location": "Modern Art Gallery, New York"
    },
    "quantity": 1,
    "status": "PAID"
  }
]
}

```

## 6. Thanh toán

- Endpoint: POST /api/payments
- Mô tả: Thanh toán cho booking.
- Validation Rules & Messages

Field	Rule	Message
bookingId	Required, integer >0, exists, unpaid	Booking is required Booking not found Booking is already paid
cardNumber	Required, valid format (16 digits)	Card number is required Invalid card number
expiry	Required, valid MM/YY	Expiry date is required Invalid expiry format
cvv	Required, 3–4 digits	CVV is required Invalid CVV

- Request Body

```

{
  "bookingId": 501,
  "cardNumber": "1234 5678 9012 3456",
  "expiry": "12/25",
  "cvv": "123"
}

```

- Response — Validation Failed 422

```

{
  "success": false,

```

```

"message": "Validation failed",
"errors": [
  { "field": "bookingId", "message": "Booking not found or already paid" },
  { "field": "cardNumber", "message": "Invalid card number" },
  { "field": "expiry", "message": "Invalid expiry format" },
  { "field": "cvv", "message": "Invalid CVV" }
]
}

```

- Response – 200 OK

```

{
  "success": true,
  "message": "Payment successful",
  "data": {
    "paymentId": 1001,
    "bookingId": 501,
    "amount": 50.00,
    "status": "PAID"
  }
}

```

## 7. Cài đặt nhắc nhở

- Endpoint: PUT /api/users/reminders
- Mô tả: Cập nhật tùy chọn nhắc nhở sự kiện.
- Validation Rules & Messages

Field	Rule	Message
eventReminder	Required, boolean	Event reminder must be true or false

- Request Body

```

{
  "eventReminder": true
}

```

- Response — Validation Failed 422

```

{
  "success": false,
  "message": "Validation failed",

```

```
"errors": [
  { "field": "eventReminder", "message": "Must be true or false" }
]
}
```

- Response – 200 OK

```
{
  "success": true,
  "message": "Reminder settings updated successfully",
  "data": {
    "eventReminder": true
  }
}
```

## 8. Hồ sơ cá nhân

- Endpoint: PUT /api/users/profile
- Mô tả: Cập nhật thông tin cá nhân.
- Validation Rules & Messages

Field	Rule	Message
fullName	Required	Full name is required
avatar	Optional, valid URL	Invalid avatar URL (nếu có)

- Request Body

```
{
  "fullName": "Jane Doe",
  "avatar": "https://cdn.example.com/avatars/user123.jpg"
}
```

- Response — Validation Failed 422

```
{
  "success": false,
  "message": "Validation failed",
  "errors": [
    { "field": "fullName", "message": "Full name is required" },
    { "field": "avatar", "message": "Invalid avatar URL" }
  ]
}
```

- Response – 200 OK

```
{
  "success": true,
  "message": "Profile updated successfully",
  "data": {
    "userId": 1,
    "fullName": "Jane Doe",
    "email": "jane@example.com",
    "avatar": "https://cdn.example.com/avatars/user123.jpg"
  }
}
```

## **Bảo mật**

- Tất cả các endpoint (trừ /api/auth/login và /api/auth/register) yêu cầu Authorization: Bearer <token>
- Validation JWT:
  - Response : Token hết hạn – 401

```
{
  "success": false,
  "message": "Token has expired"
}
```
  - Response : Token sai/giả mạo – 401

```
{
  "success": false,
  "message": "Invalid token"
}
```
  - Response : Không gửi token – 401

```
{
  "success": false,
  "message": "Missing access token"
}
```
- JWT token được trả về sau đăng nhập.
- Mật khẩu băm (BCrypt) trước khi lưu.

## Database Schema

### 1. Bảng users

Column	Type	Constraints
id	BIGINT	PK, AUTO_INCREMENT
full_name	VARCHAR(255)	NOT NULL
email	VARCHAR(255)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL (bcrypt hashed)
avatar	VARCHAR(512)	NULL (URL)
role	ENUM(USER,ADMIN)	DEFAULT USER
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

### 2. Bảng events

Column	Type	Constraints
id	BIGINT	PK, AUTO_INCREMENT
title	VARCHAR(255)	NOT NULL
date_time	DATETIME	NOT NULL
location	VARCHAR(255)	NOT NULL
price	DECIMAL(10,2)	DEFAULT 0
description	TEXT	NULL
image_url	VARCHAR(512)	NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP
updated_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP

### 3. Bảng bookings

Column	Type	Constraints
id	BIGINT	PK, AUTO_INCREMENT
user_id	BIGINT	FK → users.id, NOT NULL
event_id	BIGINT	FK → events.id, NOT NULL
quantity	INT	NOT NULL
total_price	DECIMAL(10,2)	NOT NULL
status	ENUM(PENDING, PAID, CANCELLED)	DEFAULT PENDING
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP



#### 4. Bảng payments

Column	Type	Constraints
id	BIGINT	PK, AUTO_INCREMENT
booking_id	BIGINT	FK → bookings.id, UNIQUE, NOT NULL
amount	DECIMAL(10,2)	NOT NULL
status	ENUM(PAID, FAILED)	DEFAULT PAID
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

#### 5. Bảng reminders

Column	Type	Constraints
id	BIGINT	PK, AUTO_INCREMENT
user_id	BIGINT	FK → users.id, UNIQUE, NOT NULL
event_reminder	BOOLEAN	DEFAULT TRUE
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

#### Quan hệ

- users (1) — (N) bookings
- users (1) — (1) reminders
- users (1) — (N) payments (thông qua bookings)
- events (1) — (N) bookings
- bookings (1) — (1) payments