FairFree Backend – API Specification

1. General

Base URL: http://localhost:8080
API Base Path: /api/v1
Authentication: Bearer JWT
Header: Authorization: Bearer <token>
Content-Type: application/json (multipart/form-data for item creation)

2. Error Codes

HTTP Code	Meaning	Description
400	Bad Request	Invalid input, validation error, invalid credentials
401	Unauthorized	Missing or invalid JWT
403	Forbidden	Action not allowed for current user
404	Not Found	Resource not found
500	Internal Server Error	Unhandled server error

3. Authentication

POST /auth/register

Request

```
{
  "fullName": "John Doe",
  "email": "john@example.com",
  "password": "password123"
}
```

Response – 201

```
{
  "message": "User registered successfully"
}
```

Errors: 400 (email exists, invalid data)

POST /auth/login

Request

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

Response – 200

```
{
  "id": 1,
  "email": "user@gmail.com",
  "fullName": "Normal User",
  "roles": ["ROLE_USER"],
  "token": "JWT_TOKEN"
}
```

Errors: 400 (invalid password), 404 (user not found)

4. Users

GET /users/me

Response – 200

```
{
  "id": 1,
  "email": "user@gmail.com",
  "fullName": "Normal User",
  "roles": ["ROLE_USER"]
}
```

GET /users/{id}

Response – 200

```
{
  "id": 2,
  "email": "other@gmail.com",
  "fullName": "Other User",
  "roles": ["ROLE_USER"]
}
```

5. Items

POST /items (multipart/form-data)

itemToBeAddedString

```
{
  "title": "Free books",
  "description": "Old textbooks",
  "quantity": 2,
  "neverExpires": false,
  "expiresAfterDays": 7
}
```

Response – 201

```
{
  "id": 10,
  "name": "Free books",
  "status": "AVAILABLE",
  "imageUrls": ["https://s3..."],
  "owner": { "id": 1, "fullName": "Normal User" }
}
```

Errors: 400, 401

POST /items/{itemId}/claim

Response – 200

```
{
  "id": 55,
  "userId": 2,
  "userName": "John Doe",
  "status": "PENDING"
}
```

Errors: 400 (own item), 404

POST /items/approve/claims/{claimId}

Response – 200

```
{
  "id": 55,
  "status": "APPROVED"
}
```

6. Feed

GET /feed

Response – 200

```
{
  "items": [
    {
      "id": 10,
      "authorName": "Normal User",
      "text": "Old textbooks",
      "imageUrl": "https://..."
    }
  ],
  "page": 0,
  "totalPages": 1,
  "totalItems": 1
}
```

7. Notifications

GET /notifications/me

Response – 200

```
[
  {
    "id": 1,
    "message": "Someone claimed your item",
    "type": "ITEM_CLAIMED",
    "read": false
  }
]
```

PUT /notifications/mark-read

Response – 200

```
"Notifications read updated"
```