Enhanced Login API Documentation

Endpoint

```
POST /api/auth/login
```

Description

Validates a JWT token and returns comprehensive user information including account details, personal information, contact details, role-specific data, and additional contextual information such as enrollments, progress tracking, and trading levels.

Request Headers

```
Content-Type: application/json
```

Request Body Parameters

Field	Type	Required	Description
`token`	string	Yes	JWT authentication token

Sample Request

```
json

{
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJhY2NvdW50SWQiOjEyMzQ1LCJ1c2VybmFtZSI6Im
}
```

Sample Response - Success (200 OK)

Student Account Response

json

```
{
  "success": true,
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
  "user": {
    "account": {
      "account_id": 12345,
      "username": "johndoe123",
      "account_status": "active",
      "last_login": "2024-12-20T10:30:00.000Z",
      "failed_login_attempts": 0,
      "locked_until": null,
      "created_at": "2024-01-15T09:00:00.000Z",
      "updated_at": "2024-12-20T10:30:00.000Z"
    },
    "role": {
      "role_id": 2,
      "role_name": "student",
      "permissions": "read_courses,submit_assignments,view_progress"
    },
    "person": {
      "person_id": 67890,
      "first_name": "John",
      "middle_name": "Michael",
      "last_name": "Doe",
      "full_name": "John Michael Doe",
      "gender": "Male",
      "birth_date": "1990-05-15",
      "birth_place": "New York",
      "email": "john.doe@example.com",
      "education": "Bachelor's Degree",
      "created_at": "2024-01-15T09:00:00.000Z",
      "updated_at": "2024-01-15T09:00:00.000Z"
    },
    "contact_info": [
      {
        "contact_type": "email",
        "contact_value": "john.doe@example.com",
        "is_primary": true
      },
      {
        "contact_type": "phone",
        "contact_value": "+1234567890",
        "is_primary": true
      },
      {
        "contact_type": "address",
        "contact_value": "123 Main Street, New York, NY",
        "is_primary": true
      }
    ],
    "profile": {
      "student_id": "S1703123456789_67890",
      "graduation_status": "enrolled",
      "academic_standing": "good",
      "registration_date": "2024-01-15",
      "current_trading_level": "Intermediate",
      "total_enrollments": 3,
      "active_enrollments": 2,
      "completed_courses": 1
    },
    "additional_data": {
      "trading_levels": [
        {
          "level_name": "Intermediate",
          "level_description": "Intermediate trading knowledge",
          "is_current": true,
          "assigned_date": "2024-06-01T00:00:00.000Z"
        },
        {
          "level_name": "Beginner",
          "level_description": "Basic trading knowledge",
          "is_current": false,
          "assigned_date": "2024-01-15T00:00:00.000Z"
        }
      ],
      "learning_preferences": [
        {
          "device_type": "Desktop,Mobile",
          "learning_style": "Visual,Interactive",
          "created_at": "2024-01-15T09:00:00.000Z"
        }
      ],
      "enrollments": [
        {
          "enrollment_id": 1001,
          "enrollment_date": "2024-12-01T00:00:00.000Z",
          "completion_date": null,
```

```json
        "status": "active",
        "progress_percentage": 45,
        "course_id": 201,
        "course_name": "Advanced Trading Strategies",
        "course_description": "Learn advanced trading techniques",
        "course_level": "Intermediate"
      },
      {
        "enrollment_id": 1002,
        "enrollment_date": "2024-11-15T00:00:00.000Z",
        "completion_date": null,
        "status": "active",
        "progress_percentage": 78,
        "course_id": 202,
        "course_name": "Risk Management",
        "course_description": "Master risk management principles",
        "course_level": "Intermediate"
      },
      {
        "enrollment_id": 1003,
        "enrollment_date": "2024-10-01T00:00:00.000Z",
        "completion_date": "2024-11-01T00:00:00.000Z",
        "status": "completed",
        "progress_percentage": 100,
        "course_id": 101,
        "course_name": "Trading Fundamentals",
        "course_description": "Basic trading concepts and principles",
        "course_level": "Beginner"
      }
    ],
    "recent_progress": [
      {
        "progress_id": 5001,
        "lesson_id": 301,
        "completion_status": "completed",
        "completion_date": "2024-12-19T14:30:00.000Z",
        "time_spent": 1800,
        "score": 85,
        "lesson_name": "Technical Analysis Basics",
        "lesson_order": 3,
        "course_name": "Advanced Trading Strategies"
      },
      {
        "progress_id": 5002,
          "lesson_id": 302,
          "completion_status": "in_progress",
          "completion_date": null,
          "time_spent": 900,
          "score": null,
          "lesson_name": "Chart Patterns",
          "lesson_order": 4,
          "course_name": "Advanced Trading Strategies"
        }
      ]
    }
  }
}
```

Staff Account Response

json

```json
{
  "success": true,
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
  "user": {
    "account": {
      "account_id": 12346,
      "username": "janestaff",
      "account_status": "active",
      "last_login": "2024-12-20T10:30:00.000Z",
      "failed_login_attempts": 0,
      "locked_until": null,
      "created_at": "2024-01-10T08:00:00.000Z",
      "updated_at": "2024-12-20T10:30:00.000Z"
    },
    "role": {
      "role_id": 3,
      "role_name": "staff",
      "permissions": "manage_courses,view_students,create_assignments"
    },
    "person": {
      "person_id": 67891,
      "first_name": "Jane",
      "middle_name": null,
      "last_name": "Smith",
      "full_name": "Jane Smith",
      "gender": "Female",
      "birth_date": "1985-08-20",
      "birth_place": "Los Angeles",
      "email": "jane.staff@company.com",
      "education": "Master's Degree",
      "created_at": "2024-01-10T08:00:00.000Z",
      "updated_at": "2024-01-10T08:00:00.000Z"
    },
    "contact_info": [
      {
        "contact_type": "email",
        "contact_value": "jane.staff@company.com",
        "is_primary": true
      },
      {
        "contact_type": "phone",
        "contact_value": "+0987654321",
        "is_primary": true
      }
    ],
    "profile": {
      "staff_id": 2001,
      "employee_id": "EMP1703123456789",
      "employment_status": "active",
      "hire_date": "2024-01-10T00:00:00.000Z"
    },
    "additional_data": {}
  }
}
```

Error Responses

Missing Token (400 Bad Request)

json

```json
{
  "error": "Token required"
}
```

Invalid Token (401 Unauthorized)

json

```json
{
  "error": "Invalid token"
}
```

Expired Token (401 Unauthorized)

json

```json
{
  "error": "Invalid or expired token"
}
```

Validation Error (400 Bad Request)

```json
{
  "errors": [
    {
      "field": "token",
      "message": "Token must be a string"
    }
  ]
}
```

Features and Functionality

Authentication

- Validates JWT token signature and expiration
- Verifies token matches the one stored in the database
- Updates last login timestamp upon successful validation

Comprehensive User Data

- **Account Information**: Login credentials, status, and security details
- **Personal Information**: Full name, demographics, and educational background
- **Contact Information**: Phone, email, and address details with primary indicators
- **Role-Based Data**: Permissions and role-specific profile information

Student-Specific Additional Data

- **Trading Levels**: Current and historical trading experience levels
- **Learning Preferences**: Preferred devices and learning styles
- **Enrollments**: Current and completed course enrollments with progress
- **Progress Tracking**: Recent lesson completions and scores (limited to 10 most recent)

Staff-Specific Data

- **Employment Details**: Employee ID, status, and hire date
- **Administrative Information**: Role permissions for system access

Data Relationships

- Links accounts to persons through role-specific tables (students/staff)

- Retrieves contact information associated with the person
- Fetches course enrollment and progress data for students
- Provides trading level progression history

cURL Example

bash

```bash
curl -X POST http://localhost:3000/api/auth/login \
  -H "Content-Type: application/json" \
  -d '{
    "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJhY2NvdW50SWQiOjEyMzQ1LCJ1c2VybmFtZSI6
  }'
```

JavaScript/Fetch Example

javascript

```
const validateToken = async (token) => {
  try {
    const response = await fetch('/api/auth/login', {
      method: 'POST',
      headers: {
        'Content-Type': 'application/json',
      },
      body: JSON.stringify({ token })
    });

    const result = await response.json();

    if (response.ok) {
      console.log('Token validation successful:', result);

      // Access different data sections
      const { account, person, profile, contact_info, additional_data } = result.user;

      console.log('User account:', account);
      console.log('Personal info:', person);
      console.log('Contact info:', contact_info);
      console.log('Profile:', profile);

      if (additional_data.enrollments) {
        console.log('Current enrollments:', additional_data.enrollments.filter(e => e.statu
      }

      return result;
    } else {
      console.error('Token validation failed:', result);
      throw new Error(result.error);
    }
  } catch (error) {
    console.error('Network error:', error);
    throw error;
  }
};

// Usage
const token = localStorage.getItem('authToken');
if (token) {
  validateToken(token)
    .then(userData => {
        // Handle successful validation
        console.log('Logged in user:', userData.user.person.full_name);
      })
      .catch(error => {
        // Handle authentication failure
        console.error('Authentication failed:', error);
        // Redirect to login page
      });
  }
```

Response Data Structure

The response includes several key sections:

1. **Account**: Authentication and account status information
2. **Role**: User role and permissions
3. **Person**: Personal demographic information
4. **Contact Info**: Array of contact methods with primary indicators
5. **Profile**: Role-specific summary data with calculated fields
6. **Additional Data**: Comprehensive related data (enrollments, progress, etc.)

Important Notes

- Token validation includes both JWT signature verification and database token matching
- Last login timestamp is automatically updated on successful validation
- Contact information is sorted by primary status and type
- Student progress data is limited to the 10 most recent entries for performance
- All timestamps are returned in ISO 8601 format
- Full name is automatically constructed from first, middle, and last names
- Trading levels are ordered by assignment date (most recent first)
- Course enrollments include progress percentages and completion status
- Staff accounts have minimal additional data compared to student accounts
- All database queries use proper JOIN operations for data integrity