

Arthomed Healthcare Backend

Comprehensive Documentation - API Documentation

Generated on 7/25/2025

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Authentication APIs

Send OTP

Send OTP to mobile number for authentication.

Endpoint: `POST /api/auth/send-otp`

Request Body:

```
{
  "mobileNumber": "9876543210"
}
```

Success Response (200):

```
{
  "success": true,
  "message": "OTP sent successfully",
  "data": {
    "message": "OTP sent to your mobile number",
    "expiresIn": 300
  }
}
```

Error Responses:

- `400 Bad Request` - Invalid mobile number format
- `429 Too Many Requests` - Rate limit exceeded
- `500 Internal Server Error` - SMS service failure

Verify OTP

Verify OTP and authenticate user.

Endpoint: `POST /api/auth/verify-otp`

Request Body:

```
{
  "mobileNumber": "9876543210",
  "otp": "123456"
}
```

Success Response (200):

```
{
  "success": true,
  "message": "OTP verified successfully",
  "data": {
    "user": {
      "_id": "64f1234567890abcdef12345",
      "mobileNumber": "9876543210",
      "name": "John Doe",
      "role": "patient",
      "isVerified": true
    },
    "tokens": {
      "accessToken": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
      "refreshToken": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
      "expiresIn": 3600
    }
  }
}
```

Error Responses:

- `400 Bad Request` - Invalid OTP
- `401 Unauthorized` - OTP expired or maximum attempts exceeded
- `404 Not Found` - OTP not found

Refresh Token

Refresh access token using refresh token.

Endpoint: `POST /api/auth/refresh-token`

Request Body:

```
{
  "refreshToken": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9..."
}
```

Success Response (200):

```
{
  "success": true,
  "message": "Token refreshed successfully",
  "data": {
    "accessToken": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
    "expiresIn": 3600
  }
}
```

Logout

Logout user and invalidate tokens.

Endpoint: `POST /api/auth/logout`

Headers:

```
Authorization: Bearer
```

Success Response (200):

```
{
  "success": true,
  "message": "Logged out successfully"
}
```

User Management APIs

Get Current User Profile

Get the authenticated user's profile information.

Endpoint: `GET /api/users/profile`

Headers:

```
Authorization: Bearer
```

Success Response (200):

```
{
  "success": true,
  "data": {
    "user": {
```

```
{
  "_id": "64f1234567890abcdef12345",
  "mobileNumber": "9876543210",
  "name": "John Doe",
  "email": "john@example.com",
  "role": "patient",
  "isActive": true,
  "isVerified": true,
  "profile": {
    "dateOfBirth": "1990-01-15",
    "gender": "male",
    "address": {
      "street": "123 Main St",
      "city": "Mumbai",
      "state": "Maharashtra",
      "pincode": "400001",
      "country": "India"
    }
  },
  "patientInfo": {
    "bloodGroup": "O+",
    "allergies": ["Penicillin"],
    "medicalHistory": []
  },
  "createdAt": "2024-01-15T10:30:00.000Z",
  "updatedAt": "2024-01-15T10:30:00.000Z"
}
```

Update User Profile

Update the authenticated user's profile information.

Endpoint: `PUT /api/users/profile`

Headers:

Authorization: Bearer

Request Body:

```
{
  "name": "John Smith",
  "email": "johnsmith@example.com",
  "profile": {
    "dateOfBirth": "1990-01-15",
    "gender": "male",
    "address": {
      "street": "456 New St",
      "city": "Mumbai",
      "state": "Maharashtra",
      "pincode": "400002",
      "country": "India"
    }
  },
  "patientInfo": {
    "bloodGroup": "O+",
    "allergies": ["Penicillin", "Dust"]
  }
}
```

Success Response (200):

```
{
  "success": true,
  "message": "Profile updated successfully",
  "data": {
    "user": {
      // Updated user object
    }
  }
}
```

Get All Users (Admin Only)

Retrieve all users with pagination and filtering.

Endpoint: `GET /api/users`

Headers:

```
Authorization: Bearer
```

Query Parameters:

- `page` (optional) - Page number (default: 1)
- `limit` (optional) - Items per page (default: 10)
- `role` (optional) - Filter by role
- `search` (optional) - Search by name or mobile number
- `isActive` (optional) - Filter by active status

Example: `GET /api/users?page=1&limit=10&role=doctor&search=john`

Success Response (200):

```
{
  "success": true,
  "data": {
    "items": [
      {
        "_id": "64f1234567890abcdef12345",
        "mobileNumber": "9876543210",
        "name": "Dr. John Doe",
        "email": "john@example.com",
        "role": "doctor",
        "isActive": true,
        "isVerified": true,
        "doctorInfo": {
          "specialization": "Cardiology",
          "qualification": "MBBS, MD",
          "experience": 10,

```



```

        "consultationFee": 500
      },
      "createdAt": "2024-01-15T10:30:00.000Z"
    }
  ],
  "pagination": {
    "current": 1,
    "pages": 5,
    "total": 50,
    "limit": 10,
    "hasNext": true,
    "hasPrev": false
  }
}

```

Get Doctors List

Get list of all doctors with their specializations.

Endpoint: `GET /api/users/doctors`

Query Parameters:

- `specialization` (optional) - Filter by specialization
- `page` (optional) - Page number
- `limit` (optional) - Items per page

Success Response (200):

```

{
  "success": true,
  "data": {
    "items": [
      {
        "_id": "64f1234567890abcdef12345",
        "name": "Dr. John Doe",
        "doctorInfo": {

```

```

        "specialization": "Cardiology",
        "qualification": "MBBS, MD",
        "experience": 10,
        "consultationFee": 500,
        "schedule": [
            {
                "day": "monday",
                "startTime": "09:00",
                "endTime": "17:00",
                "isAvailable": true
            }
        ]
    },
    "isActive": true
}
],
"pagination": {
    "current": 1,
    "pages": 3,
    "total": 25,
    "limit": 10
}
}
}

```

Appointment Management APIs

Book Appointment

Book a new appointment with a doctor.

Endpoint: `POST /api/appointments/book`

Headers:

```
Authorization: Bearer  
Content-Type: multipart/form-data
```

Form Data:

```
doctorId: 64f1234567890abcdef12345  
appointmentDate: 2024-02-15  
appointmentTime: 10:00  
purposeOfVisit: Regular checkup  
reason: Annual health checkup  
symptoms: No specific symptoms  
images: [file1.jpg, file2.pdf]
```

Success Response (201):

```
{  
  "success": true,  
  "message": "Appointment booked successfully",  
  "data": {  
    "appointment": {  
      "_id": "64f9876543210fedcba09876",  
      "patient": {  
        "_id": "64f1234567890abcdef12345",  
        "name": "John Doe",  
        "mobileNumber": "9876543210"  
      },  
      "doctor": {  
        "_id": "64f1234567890abcdef67890",  
        "name": "Dr. Jane Smith",  
        "doctorInfo": {  
          "specialization": "Cardiology"  
        }  
      },  
      "appointmentDate": "2024-02-15",  
      "appointmentTime": "10:00",  
      "status": "pending",  
      "purposeOfVisit": "Regular checkup",  
    }  
  }  
}
```

```
"reason": "Annual health checkup",
"symptoms": "No specific symptoms",
"images": [
  {
    "filename": "64f1234567890abcdef12345_1642234567890_r",
    "originalName": "medical_report.jpg",
    "path": "uploads/appointments/2024/02/64f1234567890ab",
    "size": 1024000,
    "mimeType": "image/jpeg"
  }
],
"createdAt": "2024-01-15T10:30:00.000Z"
}
}
```

Get User Appointments

Get appointments for the authenticated user.

Endpoint: `GET /api/appointments/my-appointments`

Headers:

```
Authorization: Bearer
```

Query Parameters:

- `status` (optional) - Filter by status
- `page` (optional) - Page number
- `limit` (optional) - Items per page
- `startDate` (optional) - Filter from date
- `endDate` (optional) - Filter to date

Success Response (200):

```
{
  "success": true,
  "data": {
    "items": [
      {
        "_id": "64f9876543210fedcba09876",
        "doctor": {
          "_id": "64f1234567890abcdef67890",
          "name": "Dr. Jane Smith",
          "doctorInfo": {
            "specialization": "Cardiology",
            "consultationFee": 500
          }
        },
        "appointmentDate": "2024-02-15",
        "appointmentTime": "10:00",
        "status": "confirmed",
        "purposeOfVisit": "Regular checkup",
        "createdAt": "2024-01-15T10:30:00.000Z"
      }
    ],
    "pagination": {
      "current": 1,
      "pages": 2,
      "total": 15,
      "limit": 10
    }
  }
}
```

Get Available Slots

Get available appointment slots for a doctor on a specific date.

Endpoint: `GET /api/appointments/slots`

Query Parameters:

- `doctorId` (required) - Doctor's ID

- **date** (required) - Date in YYYY-MM-DD format

Example: GET /api/appointments/slots?

doctorId=64f1234567890abcdef67890&date=2024-02-15

Success Response (200):

```
{
  "success": true,
  "data": {
    "doctor": {
      "_id": "64f1234567890abcdef67890",
      "name": "Dr. Jane Smith",
      "doctorInfo": {
        "specialization": "Cardiology",
        "consultationFee": 500
      }
    },
    "date": "2024-02-15",
    "availableSlots": [
      {
        "_id": "64f55555555555555555555555555555",
        "startTime": "09:00",
        "endTime": "09:30",
        "isAvailable": true,
        "consultationFee": 500
      },
      {
        "_id": "64f66666666666666666666666666666",
        "startTime": "10:00",
        "endTime": "10:30",
        "isAvailable": true,
        "consultationFee": 500
      }
    ],
    "bookedSlots": [
      {
        "startTime": "11:00",
        "endTime": "11:30",
        "isAvailable": false
      }
    ]
  }
}
```

```
}  
}
```

Cancel Appointment

Cancel an existing appointment.

Endpoint: `PUT /api/appointments/:appointmentId/cancel`

Headers:

```
Authorization: Bearer
```

Request Body:

```
{  
  "reason": "Personal emergency"  
}
```

Success Response (200):

```
{  
  "success": true,  
  "message": "Appointment cancelled successfully",  
  "data": {  
    "appointment": {  
      "_id": "64f9876543210fedcba09876",  
      "status": "cancelled",  
      "cancellationReason": "Personal emergency",  
      "refundInfo": {  
        "refundAmount": 250,  

```

```
        "refundStatus": "processed",
        "refundDate": "2024-01-15T10:30:00.000Z"
      }
    }
  }
}
```

Update Appointment Status (Doctor/Admin)

Update appointment status by doctor or admin.

Endpoint: `PUT /api/appointments/:appointmentId/status`

Headers:

```
Authorization: Bearer
```

Request Body:

```
{
  "status": "completed",
  "notes": "Patient is healthy. Prescribed vitamins.",
  "prescription": "Vitamin D3 - 1 tablet daily for 30 days"
}
```

Success Response (200):

```
{
  "success": true,
  "message": "Appointment status updated successfully",
  "data": {
```



```
"appointment": {  
  "_id": "64f9876543210fedcba09876",  
  "status": "completed",  
  "notes": "Patient is healthy. Prescribed vitamins.",  
  "prescription": "Vitamin D3 - 1 tablet daily for 30 days",  
  "completedAt": "2024-01-15T10:30:00.000Z"  
}  
}  
}
```

File Upload APIs

Upload Appointment Files

Upload medical documents/images for appointments.

Endpoint: `POST /api/files/upload/appointments`

Headers:

```
Authorization: Bearer  
Content-Type: multipart/form-data
```

Form Data:

```
files: [file1.jpg, file2.pdf, file3.png]  
appointmentId: 64f9876543210fedcba09876
```

Success Response (200):

```
{
  "success": true,
  "message": "Files uploaded successfully",
  "data": {
    "uploadedFiles": [
      {
        "filename": "64f1234567890abcdef12345_1642234567890_rep",
        "originalName": "medical_report.jpg",
        "path": "uploads/appointments/2024/02/64f1234567890abcd",
        "size": 1024000,
        "mimeType": "image/jpeg",
        "url": "/api/files/uploads/appointments/2024/02/64f1234"
      }
    ]
  }
}
```

Get File

Retrieve uploaded file.

Endpoint: `GET /api/files/:filename`

Headers:

```
Authorization: Bearer
```

Success Response (200):

- Returns the file content with appropriate Content-Type header

Delete File

Delete an uploaded file.

Endpoint: `DELETE /api/files/:filename`

Headers:

```
Authorization: Bearer
```

Success Response (200):

```
{
  "success": true,
  "message": "File deleted successfully"
}
```

Admin APIs

Get Dashboard Statistics

Get system statistics for admin dashboard.

Endpoint: `GET /api/admin/dashboard`

Headers:

```
Authorization: Bearer
```

Success Response (200):

```
{
  "success": true,
  "data": {
    "statistics": {
      "totalUsers": 1250,
      "totalDoctors": 45,
      "totalPatients": 1180,
      "totalAppointments": 3456,
      "todayAppointments": 25,
      "pendingAppointments": 12,
      "completedAppointments": 3200,
      "revenue": {
        "today": 12500,
        "thisMonth": 345000,
        "thisYear": 2450000
      }
    },
    "recentAppointments": [
      {
        "_id": "64f9876543210fedcba09876",
        "patient": {
          "name": "John Doe",
          "mobileNumber": "9876543210"
        },
        "doctor": {
          "name": "Dr. Jane Smith"
        },
        "appointmentDate": "2024-02-15",
        "appointmentTime": "10:00",
        "status": "confirmed"
      }
    ],
    "topDoctors": [
      {
        "_id": "64f1234567890abcdef67890",
        "name": "Dr. Jane Smith",
        "specialization": "Cardiology",
        "appointmentCount": 156,
        "rating": 4.8
      }
    ]
  }
}
```

} }

Manage User Status

Activate or deactivate user accounts.

Endpoint: PUT /api/admin/users/:userId/status

Headers:

Authorization: Bearer

Request Body:

```
{
  "isActive": false,
  "reason": "Violating terms of service"
}
```

Success Response (200):

```
{
  "success": true,
  "message": "User status updated successfully",
  "data": {
    "user": {
      "_id": "64f1234567890abcdef12345",
      "isActive": false,
      "statusUpdatedAt": "2024-01-15T10:30:00.000Z",
      "statusUpdatedBy": "64f99999999999999999999999999999"
    }
  }
}
```

```

    }
  }
}

```

Error Codes Reference

HTTP Status Codes

Status Code	Description
200	OK - Request successful
201	Created - Resource created successfully
400	Bad Request - Invalid request data
401	Unauthorized - Authentication required
403	Forbidden - Insufficient permissions
404	Not Found - Resource not found
409	Conflict - Resource already exists
422	Unprocessable Entity - Validation failed
429	Too Many Requests - Rate limit exceeded
500	Internal Server Error - Server error

Custom Error Codes

Error Code	Description
INVALID_MOBILE_NUMBER	Mobile number format is invalid
OTP_EXPIRED	OTP has expired
OTP_INVALID	OTP is incorrect
OTP_MAX_ATTEMPTS	Maximum OTP attempts exceeded
TOKEN_EXPIRED	JWT token has expired
TOKEN_INVALID	JWT token is invalid
USER_NOT_FOUND	User account not found

USER_INACTIVE	User account is deactivated
APPOINTMENT_NOT_FOUND	Appointment not found
SLOT_UNAVAILABLE	Time slot is not available
APPOINTMENT_CANCELLED	Appointment is already cancelled
FILE_TOO_LARGE	File size exceeds limit
INVALID_FILE_TYPE	File type not allowed
PERMISSION_DENIED	Insufficient permissions
RATE_LIMIT_EXCEEDED	Too many requests

Validation Error Format

```
{
  "success": false,
  "message": "Validation failed",
  "errors": [
    {
      "field": "mobileNumber",
      "message": "Mobile number must be exactly 10 digits",
      "value": "123456789"
    },
    {
      "field": "email",
      "message": "Please enter a valid email address",
      "value": "invalid-email"
    }
  ]
}
```