Sequence Diagram for Authentication Controller

Client · AuthController · AuthenticationService · AuthenticationManager · JwtService · UserRepository · PasswordEncoder · Database

Login Flow

Client → AuthController: POST /api/v1/auth/login (username, password)

AuthController → AuthenticationService: authenticate(AuthenticationRequest)

AuthenticationService → AuthenticationManager: authenticate(UsernamePasswordAuthenticationToken)

AuthenticationManager → UserRepository: findByUsername(username)

UserRepository → Database: SELECT user

Database ⇢ UserRepository: User data

UserRepository ⇢ AuthenticationManager: User details

AuthenticationManager → PasswordEncoder: matches(password, encodedPassword)

alt [Invalid Credentials]

AuthenticationManager ⇢ AuthenticationService: AuthenticationException

AuthenticationService ⇢ AuthController: Authentication Failed

AuthController ⇢ Client: Unauthorized

[Valid Credentials]

AuthenticationManager ⇢ AuthenticationService: Authentication Success

AuthenticationService → JwtService: generateToken(UserDetails)

JwtService → JwtService: createToken(claims, username)

Set expiration (10 hours)

Sign with HS256

JwtService ⇢ AuthenticationService: JWT Token

AuthenticationService ⇢ AuthController: AuthenticationResponse(token)

AuthController ⇢ Client: Send token

Token Validation (Subsequent Requests)

Client → AuthController: Request with JWT Header

AuthController → JwtService: extractUsername(token)

JwtService → JwtService: extractClaim(token)

JwtService → JwtService: extractAllClaims(token)

alt [Invalid Token]

JwtService ⇢ AuthController: JWT Validation Failed

AuthController ⇢ Client: Unauthorized

[Valid Token]

JwtService ⇢ AuthController: Username from token

AuthController → UserRepository: findByUsername(username)

UserRepository → Database: SELECT user

Database ⇢ UserRepository: User data

UserRepository ⇢ AuthController: User details

AuthController → JwtService: isTokenValid(token, userDetails)

JwtService → JwtService: verify expiration & username

alt [Token Valid]

JwtService ⇢ AuthController: Token Valid

AuthController ⇢ Client: Send user details

[Token Invalid]

JwtService ⇢ AuthController: Token Invalid

AuthController ⇢ Client: Unauthorized