**BACKEND STRUCTURE**

**taskmanager-backend/**

**┣ src/main/java/com/taskmanager/**

**┃ ┣ 📁 config/**

**┃ ┃ ┣ SecurityConfig.java**

**┃ ┃ ┣ WebConfig.java # CORS configuration**

**┃ ┃ ┣ JwtAuthenticationFilter.java # JWT token filter**

**┃ ┃ ┣ MailConfig.java # Email settings**

**┃ ┃ ┗ SchedulerConfig.java**

**┃ ┣ 📁 controller/**

**┃ ┃ ┣ AuthController.java**

**┃ ┃ ┣ TaskController.java**

**┃ ┃ ┣ UserController.java # User profile management**

**┃ ┃ ┗ AdminController.java**

**┃ ┣ 📁 service/**

**┃ ┃ ┣ 📁 impl/ # Service implementations**

**┃ ┃ ┃ ┣ UserServiceImpl.java**

**┃ ┃ ┃ ┣ TaskServiceImpl.java**

**┃ ┃ ┃ ┣ EmailServiceImpl.java**

**┃ ┃ ┃ ┗ ReportServiceImpl.java**

**┃ ┃ ┣ UserService.java**

**┃ ┃ ┣ TaskService.java**

**┃ ┃ ┣ AuthService.java**

**┃ ┃ ┣ EmailService.java**

**┃ ┃ ┗ ReportService.java**

**┃ ┣ 📁 repository/**

**┃ ┃ ┣ UserRepository.java**

**┃ ┃ ┣ TaskRepository.java**

**┃ ┃ ┗ RoleRepository.java**

**┃ ┣ 📁 model/ # Entities**

**┃ ┃ ┣ User.java**

**┃ ┃ ┣ Task.java**

**┃ ┃ ┗ Role.java**

**┃ ┣ 📁 dto/ # Data Transfer Objects**

**┃ ┃ ┣ LoginRequest.java**

**┃ ┃ ┣ LoginResponse.java**

**┃ ┃ ┣ TaskRequest.java**

**┃ ┃ ┣ TaskResponse.java**

**┃ ┃ ┣ UserDTO.java**

**┃ ┃ ┗ AdminStatsDTO.java**

**┃ ┣ 📁 security/ # Security utilities**

**┃ ┃ ┣ JwtUtil.java**

**┃ ┃ ┣ CustomUserDetails.java**

**┃ ┃ ┗ CustomUserDetailsService.java**

**┃ ┣ 📁 exception/ # Exception handling**

**┃ ┃ ┣ GlobalExceptionHandler.java**

**┃ ┃ ┣ ResourceNotFoundException.java**

**┃ ┃ ┣ CustomAuthenticationException.java**

**┃ ┃ ┗ ValidationException.java**

**┃ ┣ 📁 util/ # Utility classes**

**┃ ┃ ┣ PdfGenerator.java**

**┃ ┃ ┣ CsvGenerator.java**

**┃ ┃ ┗ Constants.java**

**┃ ┣ 📁 validation/ # Custom validation**

**┃ ┃ ┣ UniqueEmailValidator.java**

**┃ ┃ ┗ TaskDateValidator.java**

**┃ ┗ TaskManagerApplication.java**

**┣ src/main/resources/**

**┃ ┣ application.properties**

**┃ ┣ application-dev.properties # Development config**

**┃ ┣ application-prod.properties # Production config**

**┃ ┣ static/**

**┃ ┗ templates/ # Email templates**

**┃ ┗ email-reminder.html**

**┣ src/test/java/com/taskmanager/ # Testing**

**┃ ┣ TaskControllerTest.java**

**┃ ┣ UserServiceTest.java**

**┃ ┣ AuthServiceTest.java**

**┃ ┗ TaskManagerApplicationTests.java**

**┗ pom.xml**

**FRONTEND STRUCTURE**

**taskmanager-frontend/**

**┣ public/**

**┃ ┣ index.html**

**┃ ┣ favicon.ico**

**┃ ┗ manifest.json**

**┣ src/**

**┃ ┣ 📁 components/**

**┃ ┃ ┣ 📁 common/ # Reusable components**

**┃ ┃ ┃ ┣ Navbar.js**

**┃ ┃ ┃ ┣ Footer.js**

**┃ ┃ ┃ ┣ LoadingSpinner.js**

**┃ ┃ ┃ ┣ Pagination.js**

**┃ ┃ ┃ ┣ SearchBar.js**

**┃ ┃ ┃ ┗ ProtectedRoute.js # Route protection**

**┃ ┃ ┣ 📁 auth/ # Authentication components**

**┃ ┃ ┃ ┣ Login.js**

**┃ ┃ ┃ ┗ Register.js**

**┃ ┃ ┣ 📁 tasks/ # Task management components**

**┃ ┃ ┃ ┣ TaskList.js**

**┃ ┃ ┃ ┣ TaskForm.js**

**┃ ┃ ┃ ┣ TaskItem.js**

**┃ ┃ ┃ ┣ TaskFilters.js**

**┃ ┃ ┃ ┗ TaskExport.js**

**┃ ┃ ┣ 📁 admin/ # Admin components**

**┃ ┃ ┃ ┣ AdminDashboard.js**

**┃ ┃ ┃ ┣ UserManagement.js**

**┃ ┃ ┃ ┗ 📁 charts/**

**┃ ┃ ┃ ┃ ┣ TaskStatusChart.js**

**┃ ┃ ┃ ┃ ┣ UserActivityChart.js**

**┃ ┃ ┃ ┃ ┗ PriorityDistributionChart.js**

**┃ ┃ ┗ 📁 layout/ # Layout components**

**┃ ┃ ┃ ┗ MainLayout.js**

**┃ ┣ 📁 pages/ # Main pages**

**┃ ┃ ┣ Dashboard.js**

**┃ ┃ ┣ TasksPage.js**

**┃ ┃ ┣ Profile.js**

**┃ ┃ ┗ AdminPage.js**

**┃ ┣ 📁 context/ # State management**

**┃ ┃ ┣ AuthContext.js**

**┃ ┃ ┗ TaskContext.js**

**┃ ┣ 📁 services/ # API services**

**┃ ┃ ┣ api.js # Axios configuration**

**┃ ┃ ┣ authService.js**

**┃ ┃ ┣ taskService.js**

**┃ ┃ ┣ userService.js**

**┃ ┃ ┗ adminService.js**

**┃ ┣ 📁 hooks/ # Custom React hooks**

**┃ ┃ ┣ useAuth.js**

**┃ ┃ ┣ useTasks.js**

**┃ ┃ ┣ useLocalStorage.js**

**┃ ┃ ┗ useApi.js**

**┃ ┣ 📁 utils/ # Helper functions**

**┃ ┃ ┣ constants.js**

**┃ ┃ ┣ helpers.js**

**┃ ┃ ┣ validators.js**

**┃ ┃ ┗ formatters.js**

**┃ ┣ 📁 styles/ # Styling**

**┃ ┃ ┣ index.css**

**┃ ┃ ┣ App.css**

**┃ ┃ ┣ 📁 components/**

**┃ ┃ ┃ ┣ Navbar.css**

**┃ ┃ ┃ ┣ TaskItem.css**

**┃ ┃ ┃ ┗ Auth.css**

**┃ ┃ ┗ 📁 pages/**

**┃ ┃ ┃ ┣ Dashboard.css**

**┃ ┃ ┃ ┗ Admin.css**

**┃ ┣ 📁 assets/ # Static assets**

**┃ ┃ ┣ images/**

**┃ ┃ ┗ icons/**

**┃ ┣ App.js**

**┃ ┣ index.js**

**┃ ┗ ErrorBoundary.js # Global error handling**

**┣ package.json**

**┣ package-lock.json**

**┣ .env # Environment variables**

**┣ .env.example # Environment template**

**┗ .gitignore**