

Classes in AssistX

User

Attributes
- userId: <i>int</i>
- username: <i>String</i>
- email: <i>String</i>
- password: <i>String</i>
- phoneNumber: <i>String</i>
- registrationDate: <i>Date</i>

Methods
+ register(): <i>boolean</i>
+ login(): <i>boolean</i>
+ logout(): <i>void</i>
+ updateProfile(): <i>boolean</i>
+ raiseQuery(): <i>Query</i>
- validateCredentials(): <i>boolean</i>

Admin

Attributes
- adminId: <i>int</i>
- username: <i>String</i>
- email: <i>String</i>
- password: <i>String</i>
- accessLevel: <i>String</i>
- department: <i>String</i>

Methods
+ login(): <i>boolean</i>
+ viewDashboard(): <i>Dashboard</i>
+ handleEscalatedQuery(): <i>void</i>
+ generateReport(): <i>Report</i>
+ manageUsers(): <i>void</i>
+ updateKnowledgeBase(): <i>boolean</i>

Query

Attributes
- queryId: <i>int</i>
- userId: <i>int</i>
- queryText: <i>String</i>
- category: <i>String</i>
- priority: <i>String</i>
- status: <i>String</i>
- timestamp: <i>DateTime</i>
- isEscalated: <i>boolean</i>

Methods
+ submitQuery(): <i>boolean</i>
+ getStatus(): <i>String</i>
+ updateStatus(): <i>void</i>
calculatePriority(): <i>String</i>
- validateQuery(): <i>boolean</i>

AI Agent

Attributes
- agentId: <i>int</i>
- modelVersion: <i>String</i>
- accuracyScore: <i>float</i>
- trainingDataset: <i>String</i>
- lastUpdated: <i>DateTime</i>

Methods
+ classifyQuery(): <i>String</i>
+ generateResponse(): <i>Response</i>
+ analyzeSentiment(): <i>String</i>
+ detectIntent(): <i>String</i>
- preprocessQuery(): <i>String</i>
- loadModel(): <i>void</i>

Response

Attributes
- responseId: <i>int</i>
- queryId: <i>int</i>
- responseText: <i>String</i>
- isAutoGenerated: <i>boolean</i>
- timestamp: <i>DateTime</i>
- confidenceScore: <i>float</i>

Methods
+ sendResponse(): <i>boolean</i>
+ formatResponse(): <i>String</i>
+ getConfidenceScore(): <i>float</i>
- validateResponse(): <i>boolean</i>

Session

Attributes
- sessionId: <i>String</i>
- userId: <i>int</i>
- loginTime: <i>DateTime</i>
- lastActivity: <i>DateTime</i>
- isActive: <i>boolean</i>
- ipAddress: <i>String</i>

Methods
+ createSession(): <i>String</i>
+ validateSession(): <i>boolean</i>
+ terminateSession(): <i>void</i>
+ updateActivity(): <i>void</i>
- generateSessionId(): <i>String</i>

KnowledgeBase

Attributes
- kbId: <i>int</i>
- title: <i>String</i>
- content: <i>String</i>
- category: <i>String</i>
- keywords: <i>List<String></i>
- lastUpdated: <i>DateTime</i>

Methods
+ searchKnowledge(): <i>List<Article></i>
+ addArticle(): <i>boolean</i>
+ updateArticle(): <i>boolean</i>
+ deleteArticle(): <i>boolean</i>
- indexContent(): <i>void</i>

Dashboard

Attributes
- dashboardId: <i>int</i>
- adminId: <i>int</i>
- totalQueries: <i>int</i>
- resolvedQueries: <i>int</i>
- pendingQueries: <i>int</i>
- escalatedQueries: <i>int</i>

Methods
+ displayMetrics(): <i>void</i>
+ generateAnalytics(): <i>Report</i>
+ getEscalatedQueries(): <i>List<Query></i>
+ exportData(): <i>boolean</i>
- calculateMetrics(): <i>void</i>

EscalationQueue

Attributes
- queueId: <i>int</i>
- queryList: <i>List<Query></i>
- priorityLevel: <i>String</i>
- assignedAdmin: <i>int</i>
- createdAt: <i>DateTime</i>

Methods
+ addToQueue(): <i>boolean</i>
+ removeFromQueue(): <i>boolean</i>
+ assignToAdmin(): <i>boolean</i>
+ getPendingQueries(): <i>List<Query></i>
- sortByPriority(): <i>void</i>

Report

Attributes
- reportId: <i>int</i>
- reportType: <i>String</i>
- generatedBy: <i>int</i>
- dateGenerated: <i>DateTime</i>
- content: <i>String</i>

Methods
+ generateReport(): <i>boolean</i>
+ exportToPDF(): <i>boolean</i>
+ exportToExcel(): <i>boolean</i>
- formatData(): <i>void</i>

Visibility Modifiers Explained:

- **+ Public:** Accessible from anywhere
- **- Private:** Accessible only within the same class
- **# Protected:** Accessible within the same class and its subclasses