**Agile Track System - DFDs**

**System: Agile Track System (Single Page Application for Task Management and Team Collaboration)**

**Level 0 DFD (Context Diagram)  
Description:**

**The Level 0 DFD represents the Agile Track System as a single process interacting with external entities (User and Admin) and a database.**

**Entities & Data Flow:**

* **User: Registers, logs in, views tasks, tracks progress, views team details.**
* **Admin: Logs in, manages scrum teams, tasks, and users, views user history.**
* **Agile Track System (Main Process): Handles all interactions.**
* **Database: Stores user credentials, scrum teams, tasks, and statuses.**

**Diagram:  
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**| External Entity: User | --------> | Agile Track System |**

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**| Registers, Logs In, |**

**| Views Tasks, Team Details |**

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**| | Data Store: Database |**

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**| Manages Teams, Tasks, Users |**

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**| External Entity: Admin | |**

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**Data Flows:**

* **User -> System: Registration details, login credentials, task/team view requests.**
* **System -> User: Welcome page, task lists, team details, profile data.**
* **Admin -> System: Login credentials, team/task/user management requests.**
* **System -> Admin: Team details, task statuses, user profiles, history.**
* **System <-> Database: Stores/retrieves all data.**

**Level 1 DFD (Detailed Diagram)**

**Description:**

**The Level 1 DFD breaks down the Agile Track System into sub-processes, detailing user and admin interactions with the system and database.**

**Sub-Processes:**

1. **User Authentication: Signup and login for users.**
2. **User Task Management: Displays tasks and team details.**
3. **User Profile Viewing: Displays user-specific task profiles.**
4. **Admin Authentication: Login for admins.**
5. **Admin Team & Task Management: Manages scrum teams and tasks.**
6. **Admin User Management: Adds users and views task history.**

**Diagram:**

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**| External Entity: User | | External Entity: Admin|**

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**| Process: 1.1 - Signup | | Process: 4.1 - Admin |**

**| Store in Database | | Login |**

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**| Process: 1.2 - Login | | Process: 5.1 - Manage |**

**| Validate User | | Teams & Tasks |**

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**| Process: 2.1 - View | | Data Store: | <------ | Process: 6.1 - Manage |**

**| Tasks & Teams | | Database | ------->| Users & History |**

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**| Process: 3.1 - View |**

**| User Profile |**

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**Data Flows:**

1. **Signup (1.1): User submits details -> Stored in Database.**
2. **Login (1.2): User submits credentials -> Validated -> Redirect to User Home.**
3. **View Tasks & Teams (2.1): User requests data -> Retrieved from Database -> Displayed.**
4. **View Profile (3.1): User requests profile -> Retrieved from Database -> Displayed.**
5. **Admin Login (4.1): Admin submits credentials -> Validated -> Redirect to Admin Home.**
6. **Manage Teams & Tasks (5.1): Admin adds/updates data -> Stored in Database; Requests data -> Displayed.**
7. **Manage Users & History (6.1): Admin adds users -> Stored in Database; Requests history -> Displayed.**

**UML Use Case Diagrams for Each Module/Page**

1. **Welcome Page (US\_01)  
    Actors:**

* **User**
* **System (Database)**

**Use Cases:**

* **Visit Welcome Page (default page).**
* **Navigate to Dashboard (view Scrum Teams).**
* **Navigate to Login Page.**

**Diagram Description:**

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**| Welcome Page |**

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**| Actor: User |**

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**| View Welcome | | Navigate to |**

**| Page | | Login |**

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**| Navigate to |**

**| Dashboard |**

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**| Display Scrum |**

**| Teams |**

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**Notes:**

* **User sees "Scrum Teams" title and list of teams with "Get Details" buttons (redirects to Login if not authenticated).**

1. **Login Page  
    Actors:**

* **User**
* **System (Database)**

**Use Cases:**

* **Enter credentials and log in.**
* **Navigate to Sign Up Page.**
* **Validate credentials and redirect (User/Admin Home).**

**Diagram Description:**

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**| Login Page |**

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**| Actor: User |**

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**| Enter | | Navigate to |**

**| Credentials | | Sign Up |**

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**| Validate |**

**| Credentials |**

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**| Redirect to | | Show Error |**

**| Home Page | | Message |**

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**Notes:**

* **Validates email/password with feedback (e.g., "Please include '@'").**

1. **Sign Up Page  
    Actors:**

* **User**
* **System (Database)**

**Use Cases:**

* **Enter signup details.**
* **Validate inputs.**
* **Save new user and redirect to User Home.**

**Diagram Description:**

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**| Sign Up Page |**

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**| Actor: User |**

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**| Enter Signup |**

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**| Validate |**

**| Inputs |**

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**| Save & | | Show Error |**

**| Redirect to | | Message |**

**| User Home | +---------------+**

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**Notes:**

* **Mandatory fields: name, email, password.**

1. **User Home Page (US\_02)  
    Actors:**

* **User (Logged In)**
* **System (Database)**

**Use Cases:**

* **View Scrum Teams (Dashboard).**
* **Navigate to Profiles.**
* **Logout.**
* **View Team Details (via Get Details).**

**Diagram Description:**

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**| User Home Page |**

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**| Actor: User |**

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**| View Scrum | | Navigate to |**

**| Teams | | Profiles |**

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**| Get Team | | Logout |**

**| Details | +---------------+**

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**| Display Team |**

**| Details |**

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**Notes:**

* **Team Details shows tasks (name, description, status) and users (name, email).**

1. **User Profiles Page  
    Actors:**

* **User (Logged In)**
* **System (Database)**

**Use Cases:**

* **View tasks worked by user.**
* **Navigate to Dashboard/Logout.**

**Diagram Description:**

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**| User Profiles Page |**

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**| Actor: User |**

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**| View Tasks | | Navigate to |**

**| Worked By Me | | Dashboard |**

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**| Logout |**

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**Notes:**

* **Displays task title, description, and status for the logged-in user.**

1. **Admin Home Page (US\_03)  
    Actors:**

* **Admin (Logged In)**
* **System (Database)**

**Use Cases:**

* **View Scrum Teams (Dashboard).**
* **Navigate to Profiles.**
* **Add New Scrum.**
* **View Team Details (via Get Details).**
* **Logout.**

**Diagram Description:**

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**| Admin Home Page |**

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**| Actor: Admin |**

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**| View Scrum | | Navigate to |**

**| Teams | | Profiles |**

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**| Get Team | | Add New |**

**| Details | | Scrum |**

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**| Display Team | | Logout |**

**| Details | +---------------+**

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**Notes:**

* **Team Details allows task status updates via dropdown.**

1. **Admin Profiles Page  
    Actors:**

* **Admin (Logged In)**
* **System (Database)**

**Use Cases:**

* **View user profiles.**
* **Add New User.**
* **Get User History.**
* **Navigate to Dashboard/Logout.**

**Diagram Description:**

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**| Admin Profiles Page|**

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**| Actor: Admin |**

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**| View User | | Navigate to |**

**| Profiles | | Dashboard |**

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**| Get User | | Add New |**

**| History | | User |**

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**| Display Task | | Logout |**

**| History | +---------------+**

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**Notes:**

* **History shows tasks worked by a user (title, description, status).**

**Summary**

* **DFDs: Provide a high-level (Level 0) and detailed (Level 1) view of data flows in the Agile Track System.**
* **UML Use Case Diagrams: Cover all major pages/modules (Welcome, Login, Sign Up, User Home, User Profiles, Admin Home, Admin Profiles) with actors, use cases, and flows.**