**Project Design Phase II**

**Data Flow Diagram & User Stories**

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| Date | 6 March 2025 |
| Team ID | SWTID1741257108149874 |
| Project Name | FitFlex |
| Maximum Marks | 4 Marks |

### DFD Overview:

We'll represent the flow of data between the user, the system (FitFlex), and external components like the **ExerciseDB API** that provides exercise information.

### Key Processes in the DFD:

1. **User Interaction**: The user selects a body part or equipment.
2. **Browse Exercises**: The system sends a request to the **ExerciseDB API**.
3. **ExerciseDB API**: The external API fetches a list of exercises.
4. **View Exercise Details**: The user selects a specific exercise and the system fetches and displays detailed information from the API.
5. **Exercise Details Display**: The system shows exercise details (steps, images, target muscles, etc.).

### **Simplified DFD (Level 0):**

At this level, we'll focus on the high-level flow without going into the details of each individual interaction.

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| Users | ----> | FitFlex System | ----> | ExerciseDB API |

| (Customer) | | (Browse Exercises,| | (Exercise Data) |

+-----------------+ | View Exercise | +------------------+

^ | Details, |

| | Display Details |

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| Display Exercise |

| (Exercise Details) |

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### **DFD (Level 1) for FitFlex System - More Detailed Flow:**

This level will break down the process into more specific interactions, showing the flow of data from when the user selects a body part/equipment to when they view exercise details.

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| Users | ----> | Select Body Part/Equip | ----> | ExerciseDB API |

| (Customer) | | (Request Exercise List) | | (Fetch Exercises) |

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| | Browse Exercises |

| | (Fetch from API) |

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| | Display Exercise List |

| | (Body Part/Equip) |

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| | User Selects Exercise |

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| | View Exercise Details |

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| | Display Exercise Info |

| | (Steps, Images, Muscles)|

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| Display Youtube Link |

| (Optional Video) |

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### **User Stories and Acceptance Criteria**:

Here are the **User Stories** and **Acceptance Criteria** for the web users, which match the DFD flow.

| **User Type** | **User Story Number** | **User Story / Task** | **Acceptance Criteria** | **Priority** | **Release** |
| --- | --- | --- | --- | --- | --- |
| Customer (Web User) | USN-1 | As a User, I can browse exercises by selecting a body part. | I can see a list of exercises related to the selected body part. | High | Sprint-1 |
| Customer (Web User) | USN-2 | As a user, I can browse exercises by selecting equipment. | I can see a list of exercises related to the selected equipment. | High | Sprint-1 |
| Customer (Web User) | USN-3 | As a user, I can view detailed explanations about an exercise. | I can see exercise images, steps, and target muscles. | High | Sprint-1 |
| Customer (Web User) | USN-4 | As a user, I can see related YouTube videos. | I can navigate to the related videos on YouTube. | Low | Sprint-2 |
| Customer (Web User) | USN-5 | As a user, I can easily navigate to the home page. | I can click the home button and return to the home page. | High | Sprint-1 |

### Summary of the DFD:

* **User Actions**: The user first selects a body part or equipment to see relevant exercises.
* **System Interaction**: The system communicates with the **ExerciseDB API** to fetch a list of exercises based on the user’s selection.
* **Details**: Once the user selects a specific exercise, the system fetches and displays detailed information about that exercise, including images, steps, and muscles targeted.
* **Optional**: The system can also provide links to related YouTube videos (Sprint-2).