**🧠 Step-by-Step: How to Create a Data Flow Diagram (DFD)**

You’ll typically want to create **two levels**:

* **Level 0 (Context Diagram):** High-level overview of the system and external entities
* **Level 1:** More detailed view showing processes, data stores, and flows

**✅ 1. Define the Key Elements**

**External Entities (Actors):**

* **Family Member** (User submitting expense)
* **Family Admin** (User managing budget)
* **Notification System** (Email/SMS alert tool)

**Processes:**

* **Submit Expense**
* **Calculate Budget**
* **Generate Report**
* **Send Alert**

**Data Stores (Tables in ServiceNow):**

* Expense Table (custom, stores each expense)
* Budget Table (monthly budget per category)
* User Table (roles and user info)
* Report Table (for monthly/weekly summaries)

**🔁 2. DFD Level 0 (Context Diagram)**

pgsql

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| Family Member | ---------> | Expense Tracker App |

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| Email/SMS System | | Family Admin |

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**Explanation:**

* The **Family Member** submits expenses to the app.
* The app interacts with the **Notification System** (for alerts).
* The **Admin** sets budgets, views reports.

**🔍 3. DFD Level 1 (Detailed Flow)**

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| Family Member |

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| 1. Submit Expense |

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| Expense Table | <---------> | User Table |

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| 2. Calculate Budget |

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| Budget Table|

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| Send Alert | | Generate Report |

|(Email/SMS API) | +-------------------+

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| Report Table |

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| Family Admin |

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**🛠 Tools to Create the Diagram**

You can use:

* **Lucidchart** (recommended for clarity)
* **Draw.io** (free and simple)
* **Miro**, **Figma**, or **Visio**
* I can also generate one for you — just ask!

**📌 Key Notes**

* **Tables = Data Stores** (in ServiceNow: custom tables like x\_family\_expenses)
* **Processes = Workflows** (built in Flow Designer)
* **External Entities = Users or systems interacting with ServiceNow**

**✅ Optional Enhancements**

* Add **data fields** for each table (e.g., Expense Table → Date, Amount, Category)
* Show **automated vs. manual** processes
* Layer in **access roles** if designing with security in mind