

## Data Flow Diagrams (DFDs)

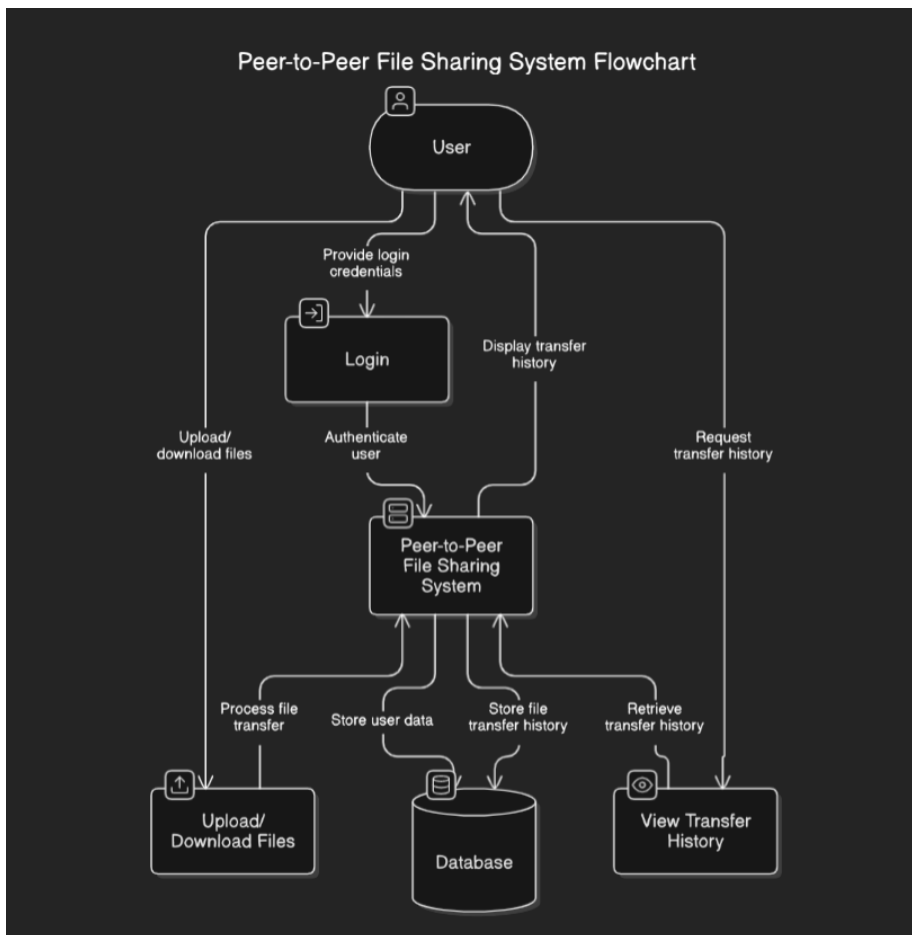
### Level 0 Data Flow Diagram (DFD)

The Level 0 DFD, also known as the context diagram, provides a high-level overview of the system, showing how external entities interact with the system. The key components are:

- User: Registers, logs in, sends files, and views transfer history.
- Peer-to-Peer File Sharing System: Represents the entire system as a single process.
- Database: Stores user data and transfer history.

The data flows include:

- User provides login credentials.
- User uploads/downloads files.
- System stores file transfer history.
- User retrieves transfer history.



## Level 1 Data Flow Diagram (DFD)

The Level 1 DFD expands on the Level 0 diagram, breaking the system into major processes and showing how data flows between them. The main processes include:

1. User Authentication: Handles user registration and login, verifying credentials.
2. File Transfer: Allows users to send and receive files directly through WebRTC.
3. Transfer History Management: Logs file transfers and allows users to retrieve their history.
4. Database Interaction: Stores user details and transfer records.

The key data flows include:

- User inputs credentials → Authentication process → Validation result returned.
- User selects a file → File transfer process → File sent via WebRTC.
- Transfer details recorded → Transfer history stored in the database.
- User requests transfer history → System retrieves data → History displayed.

