Milestone 02: Database Design

Revised Data Planning
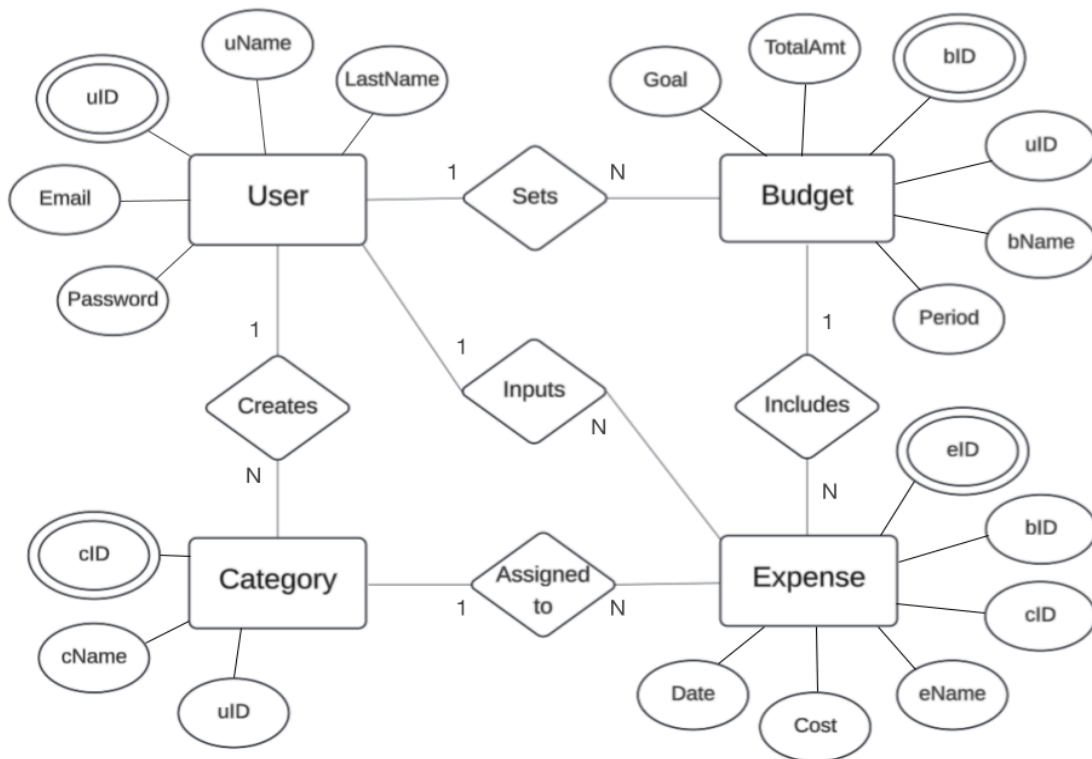
Key Data Entities

Entity Name	User	Budget	Category	Expense
Attributes	**[**PK] uID** uName LastName Email Password	**[**PK] bID** [*FK] uID bName TotalAmt Goal Period	**[**PK] cID** [*FK] uID cName	**[**PK] eID** [*FK] bID [*FK] cID [*FK] uID eName Cost Date

Key Relationships

- User to Budget (1:N)☐A single User can create multiple Budgets.
- User to Expense (1:N)☐A single User can create multiple Expenses.
- User to Category (1:N)☐A single User can create multiple Categories.
- Budget to Expense (1:N)☐Each Budget contains its own specific list of Expenses.
- Category to Expense (1:N)☐Each Expense has a Category assigned to it.

ER Diagram

SQL CREATE Statements

```sql
--User
CREATE TABLE [User] (
      uID int primary key,
      uName nvarchar(50),
      LastName nvarchar(50),
      Email varchar(50),
      [Password] varchar(20)
);

--Budget
CREATE TABLE Budget (
      bID int primary key,
      uID int foreign key references [User](uID),
      bName nvarchar(50),
      TotalAmt money,
      Goal money,
      Period varchar(50)
);

--Category
CREATE TABLE Category (
      cID int primary key,
      uID int foreign key references [User](uID),
      cName nvarchar(20)
);

--Expense
CREATE TABLE Expense (
      eID int primary key,
      bID int foreign key references Budget(bID),
      cID int foreign key references Category(cID),
      uID int foreign key references [User](uID),
      eName nvarchar(20),
      Cost money,
      Date date,
);
```