SQL PROJECT



## Create entities table

```
CREATE TABLE ETF(
  etf_ticker VARCHAR(10) PRIMARY KEY,
  etf_name VARCHAR(30) NOT NULL,
  inception_date DATE,
  aum DECIMAL(15,2) CHECK (aum >= 0),
  management_fee DECIMAL(5,2) CHECK (management_fee >= 0),
  number_of_stocks INT CHECK (number_of_stocks > 0)
)
```

```
CREATE TABLE ETF_Category (
   etf_ticker VARCHAR(10),
   category_id VARCHAR(10),
   category_name VARCHAR(30) UNIQUE NOT NULL
   FOREIGN KEY etf_ticker REFERENCES ETF(etf_ticker),
   PRIMARY KEY (etf_ticker, category_id)
)

Error: Please select a query source.
```

```
CREATE TABLE Fund_Family (
    fund_id VARCHAR(10) PRIMARY KEY,
    fund_name VARCHAR(30) NOT NULL,
    headquarters VARCHAR(30),
    aum DECIMAL(15,2) CHECK (aum >= 0),
    number_of_funds INT CHECK (number_of_funds > 0)
)
```

```
CREATE TABLE Stock (
    stock_ticker VARCHAR(10) PRIMARY KEY,
    stock_name VARCHAR(30) NOT NULL,
    ipo_date DATE
    stock_sector VARCHAR(10),
    FOERIGN KEY stock_category REFERNECES SECTOR(sector_id)
)
```

```
CREATE TABLE Sector (
    sector_id VARCHAR(10) PRIMARY KEY,
    sector_name VARCHAR(30) UNIQUE NOT NULL,
    annualized_return_1yr DECIMAL(5,2),
    annualized_return_3yr DECIMAL(5,2),
    annualized_return_5yr DECIMAL(5,2)
)
```

```
CREATE TABLE Market_Index (
   index_ticker VARCHAR(10) PRIMARY KEY,
   index_name VARCHAR(30) NOT NULL,
   number_of_contributors INT CHECK (number_of_contributors >0),
   launch_date DATE,
   base_value DECIMAL(10,2) CHECK (base_value > 0)
)
```

```
CREATE TABLE User (
    user_id VARCHAR(10) PRIMARY KEY,
    user_name VARCHAR(10) UNIQUE NOT NULL,
    user_password VARCHAR(18) NOT NULL
)
```

```
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CREATE TABLE Index_Category (
   index_ticker VARCHAR(10),
   index_category_id VARCHAR(10) NOT NULL,
   index_category_name VARCHAR(50) NOT NULL,
   FOREIGN KEY index_ticker REFERENCES Market_Index(index_ticker),
   PRIMARY KEY (indez_ticker,index_category_id))
```

## Relationship table

```
CREATE TABLE Stock_in_ETF (
    etf_ticker VARCHAR(10),
    stock_ticker VARCHAR(10),
    stock_weight DECIMAL(5,2) CHECK (stock_weight >0),
    PRIMARY KEY (etf_ticker, stock_ticker),
    FOREIGN KEY (etf_ticker) REFERENCES ETF(etf_ticker),
    FOREIGN KEY (stock_ticker) REFERENCES Stock(stock_ticker)
)
```

```
CREATE TABLE Stock_in_Sector (
    stock_ticker VARCHAR(10) PRIMARY KEY,
    sector_id VARCHAR(10) NOT NULL,
    FOREIGN KEY (stock_ticker) REFERENCES Stock(stock_ticker),
    FOREIGN KEY (sector_id) REFERENCES Sector(sector_id)
)
```

```
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CREATE TABLE ETF_has_Sector (
   etf_ticker VARCHAR(10),
   sector_id VARCHAR(10),
   sector_weight DECIMAL(5,2) CHECK (sector_weight >0), -- Percentage of ETF in
this sector
   PRIMARY KEY (etf_ticker, sector_id),
   FOREIGN KEY (etf_ticker) REFERENCES ETF(etf_ticker),
   FOREIGN KEY (sector_id) REFERENCES Sector(sector_id)
)
```

```
CREATE TABLE Stock_in_Index (
    stock_ticker VARCHAR(10),
    index_ticker VARCHAR(10),
    weight DECIMAL(5,2) CHECK (weight > 0),
    PRIMARY KEY (stock_ticker, index_ticker),
    FOREIGN KEY (stock_ticker) REFERENCES Stock(stock_ticker),
    FOREIGN KEY (index_ticker) REFERENCES Market_Index(index_ticker))
)
```

```
CREATE TABLE User_interest_ETF(
    user_id VARCHAR(10),
    etf_id VARCHAR(10),
    PRIMARY KEY (user_id,etf_id),
    FOREIGN KEY user_id REFERENCES User(user_id),
    FOREIGN KEY etf_id REFERENCES ETF(etf_id)
)
```

```
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CREATE TABLE Fund_has_ETF(
   etf_id VARCHAR(10) PRIMARY KEY,
   fund_id VARCHAR(10) NOT NULL,
   FOREIGN KEY fund_id REFERENCES Fund_Family(fund_id))
```