## STEPS TO CREATE STAR WARS CHARACTER DATABASE

### 1. *Brainstormed which tables would be necessary*

**Production table (Primary Table)**

- Table with a distinct list of movies/books/etc.
    - PK - PROD_ID
    - FK –
    - NAME
    - YEAR_RELEASED

**Production Type (Look-Up Table)**

- Table with distinct list of production types ()
    - PK - PROD_TYPE_ID
    - TYPE
        - Movie, Series, Game, Novel

**Character table (Primary Table)**

- Table with a distinct list of characters including their attributes.
    - PK - CHARACTER_ID
    - FK - SPECIES_ID
    - NAME
    - DOB
    - HEIGHT
    - WEIGHT

**Character Production table (Intersection Table)**

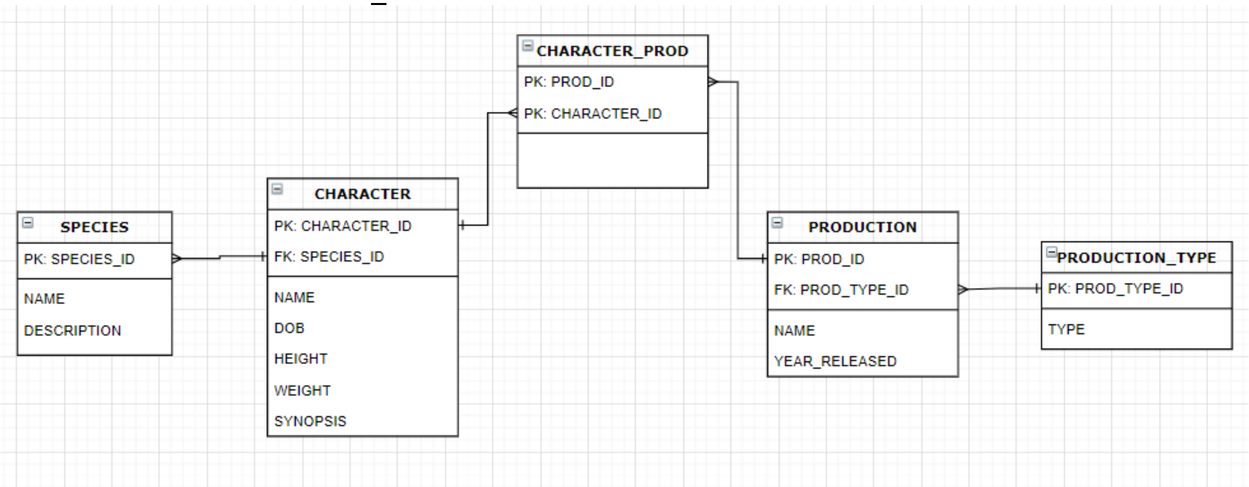
- Table to connect characters to their respective production
    - PK - PROD_ID
    - PK - CHARACTER_ID

**Species table (Look-Up Table)**

- Table with distinct list/description of species.
    - PK - SPECIES_ID
    - NAME
    - DESCRIPTION

**Order of Creation:**

1. SPECIES
2. CHARACTER
3. PRODUCTION
4. CHARCTER_PROD
5. PRODUCTION_TYPE



**ENTITY RELATION DIAGRAM**

### *2. Created the Tables*

```
USE [MFGTrain]
GO
/****** Object:  Table [dbo].[LKP_SPECIES] Script Date: 7/23/2021 2:32:40 PM ******/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO

CREATE TABLE [dbo].[LKP_SPECIES](
      [SPECIES_ID] [int] NOT NULL PRIMARY KEY,
      [NAME] [varchar](50) NOT NULL,
      [DESCRIPTION] [varchar](255) NOT NULL,
)
GO

CREATE TABLE [dbo].[DIM_CHARACTER](
      [CHARACTER_ID] [int] NOT NULL PRIMARY KEY,
      [SPECIES_ID] [int] NOT NULL,
      [NAME] [varchar](255) NOT NULL,
      [DOB] [varchar](255) NOT NULL,
      [HEIGHT] [varchar](255) NOT NULL,
      [WEIGHT] [varchar](255) NOT NULL,
      [SYNOPSIS] [varchar](255) NOT NULL,
      FOREIGN KEY (SPECIES_ID)
            REFERENCES LKP_SPECIES(SPECIES_ID)
)
GO

CREATE TABLE [dbo].[LKP_PRODUCTION_TYPE](
      [PROD_TYPE_ID] [int] NOT NULL PRIMARY KEY,
      [TYPE] [varchar](255) NOT NULL
)
GO

CREATE TABLE [dbo].[BASE_PRODUCTION](
      [PROD_ID] [int] NOT NULL PRIMARY KEY,
      [PROD_TYPE_ID] [int] NOT NULL,
      [NAME] [varchar](255) NOT NULL,
      [YEAR_RELEASED] [INT] NOT NULL,
      FOREIGN KEY (PROD_TYPE_ID)
            REFERENCES LKP_PRODUCTION_TYPE(PROD_TYPE_ID)
)
GO

CREATE TABLE [dbo].[INTERSECT_CHARACTER_PROD](
      [PROD_ID] [int] NOT NULL,
      [CHARACTER_ID] [int] NOT NULL,
      PRIMARY KEY (PROD_ID, CHARACTER_ID),
      FOREIGN KEY (PROD_ID)
            REFERENCES BASE_PRODUCTION(PROD_ID),
      FOREIGN KEY (CHARACTER_ID)
            REFERENCES DIM_CHARACTER(CHARACTER_ID)
)
GO
```

3. ***Gathered Star Wars Character Data***

   [ATTACHED IN EXCEL FILE CALLED STAR WARS CHARACTER DATABASE (SWCDB)]

4. ***Import the Data into Microsoft SQL Server Management***

   MFGTRAIN > TASKS > IMPORT DATA

5. ***Insert the data from the imported tables to the tables created initially***

```
USE [MFGTrain]
GO

INSERT INTO LKP_SPECIES SELECT * FROM SPECIES$

INSERT INTO DIM_CHARACTER SELECT * FROM CHARACTER$

INSERT INTO LKP_PRODUCTION_TYPE SELECT * FROM PRODUCTION_TYPE$

INSERT INTO BASE_PRODUCTION SELECT * FROM PRODUCTION$

INSERT INTO INTERSECT_CHARACTER_PROD SELECT * FROM CHARACTER_PROD$
```

6. ***Initial Issues***

   **Issue with inserting the SYNOPSIS Column**

   varchar(255) was not large enough to handle one of the Synopsis's

   Had to be update to varchar(255)

   **Issue with null values in PRODUCTION and PRODUCTION_TYPE tables**

```
USE [MFGTrain]
GO

DELETE FROM PRODUCTION_TYPE$ WHERE PROD_TYPE_ID IS NULL;

DELETE FROM PRODUCTION$ WHERE PROD_ID IS NULL;
```

   **Had to drop the Intersect Character Production table**

```
USE [MFGTrain]
GO

DROP TABLE INTERSECT_CHARACTER_PROD;
```

7. ***Inserted the data once again***

### *8. Generated example reports*

Find all productions that Luke Skywalker appeared in.

```
USE MFGTRAIN;
SELECT C.NAME, P.NAME
FROM DIM_CHARACTER C
INNER JOIN INTERSECT_CHARACTER_PROD CP ON C.CHARACTER_ID = CP.CHARACTER_ID
INNER JOIN BASE_PRODUCTION P ON CP.PROD_ID = P.PROD_ID
WHERE C.NAME = 'Luke Skywalker'
```

Generate a list of each distinct species in SWCDB

```
USE MFGTRAIN;
SELECT [SPECIES_ID], [NAME], [DESCRIPTION] FROM LKP_SPECIES
```

Generate a report with character name, species, character synopsis, and all Productions that the character has appeared in.

```
USE MFGTRAIN;
SELECT C.NAME, S.NAME, C.SYNOPSIS, P.NAME
FROM LKP_SPECIES S
INNER JOIN DIM_CHARACTER C ON S.SPECIES_ID = C.SPECIES_ID
INNER JOIN INTERSECT_CHARACTER_PROD CP ON CP.CHARACTER_ID = C.CHARACTER_ID
INNER JOIN BASE_PRODUCTION P ON P.PROD_ID = CP.PROD_ID;
```

Generate a list of Star Wars Productions with Production Name and Production Type (Movie, Series, Game, Novel), and year released

```
USE MFGTRAIN;
SELECT P.NAME, PT.TYPE, P.YEAR_RELEASED
FROM BASE_PRODUCTION P
INNER JOIN LKP_PRODUCTION_TYPE PT ON P.PROD_TYPE_ID = PT.PROD_TYPE_ID
```

**[RESULTS ARE ATTACHED IN EXCEL FILE CALLED STAR WARS CHARACTER DATABASE (SWCDB) REPORTS]**

### *9. Possible Extensions to the project*

- Create a user interface
- Add an affiliations table to add to the project database
- ...