DATABASE FOUNDATIONS

Assignment 1

Shabnam Heidaripour

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What is the purpose of creating this table?

The purpose of this database is to manage records of children's and young adult books, including details about the author, illustrator, age category (children or young adult), page count, editor, number of editions, price and availability on the publisher's website. This table is to enable a thorough analysis of publication trends within a publishing house, where I have previous experience in an executive role.

By collecting and categorizing this information, we can gain insights into various aspects of book production and popularity. For instance, we can track how many books a specific author has published, identify which books are aimed at children versus young adults, and examine the collaborative partnerships between authors and illustrators. Additionally, data on the number of editions offers insights into each title's reception, highlighting which books have undergone multiple print runs. The availability status is also useful for determining whether a book is currently in stock.

By the above mentioned, we can generate various outputs and summaries, such as assessing an author or illustrator's popularity, evaluating sales performance, and categorizing books by target age group or print frequency. These insights can then inform decisions on future publications and marketing strategies.

As mentioned above we have these data:

- title - varchar(100), the titles can be long and unpredictable
- writer - varchar(100), the names can also be long and unpredictable
- Illustrator - varchar(100), we have the same situation with this one too

- Age_category - char(2), for this we already agree on the two values: Children and Young adult, which we will show by 'Ch' and 'YA'
- Pages - int, we only have numbers and we use int for them
- Editor - varchar(100), as mentioned earlier it is a name and can be long
- Edition - smallint, the number of editions is a very small number
- price - int, the prices are according to Iranian currency that is why they are long such as 158000 Toman so integer
- Availability - char(3), since we have not learned the booleans yet we have to use small char such 'yes' or 'no'

Create the table code:

By writing these commands we want to create a table with 9 columns that show the below entities.

```
CREATE  TABLE books (
 title        varchar(100)  NOT NULL ,
 writer           varchar(100)  NOT NULL ,
 illustrator      varchar(100)  NOT NULL ,
 age_category          char(2)  NOT NULL,
 pages       int  NOT NULL ,
 editor     varchar(100)  NOT NULL ,
 edition                  smallint NOT NULL,
 price                   int   NOT NULL ,
 availability            char(3)    NOT NULL
 );
```

Inserting the rows and their values:

Below are the codes that we use to insert a few values to each column with a specific value for each one.

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Cricket, why do you sing?', 'Babak Saberi', 'Negin Ehtesabian', 'Ch', 32, 'Mojgan Kalhor', 2, 32000, 'no');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Mr. Frog', 'Mostafa Khoraman', 'Sara Khoraman', 'Ch', 32, 'Mojgan Kalhor', 2, 10000, 'no');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Sleep full of sheep', 'Pejman Rahimizade', 'Pejman Rahimizade', 'Ch', 28, 'Mojgan Kalhor', 5, 110000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('The black crow goes on a trip', 'Babak Saberi', 'Shabnam Chaychian', 'Ch', 24, 'Mojgan Kalhor', 5, 95000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('What to wear?', 'Payam Ebrahimi', 'Mahboube Yazdani', 'Ch', 32, 'Mojgan Kalhor', 2, 22000, 'no');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('I’m a scarecrow, but I’m scared', 'Ahmad Akbarpour', 'Maryam Tahmasebi', 'Ch', 36, 'Mojgan Kalhor', 5, 135000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Wedding with the sun', 'Ahmad Akbarpour', 'Hamide Khosravian', 'Ch', 32, 'Mojgan Kalhor', 2, 150000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('The boxer', 'Hasan Mousavi', 'Hasan Mousavi', 'Ch', 36, 'Mojgan Kalhor', 2, 145000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Paper boat', 'Anahita Teymourian', 'Anahita Teymourian', 'Ch', 28, 'Mojgan Kalhor', 1, 140000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('The new year unlike every year', 'Maryam Fayazi', 'Mahboube Yazdani', 'Ch', 32, 'Mojgan Kalhor', 2, 28000, 'no');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('An umbrella with white butterflies', 'Farhad Hasanzade', 'Ghazale Bigdeloo', 'Ch', 32, 'Mojgan Kalhor', 6, 175000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Giraffe spaghetti and turtle salad', 'Reza Dalvand', 'Reza Dalvand', 'Ch', 28, 'Mojgan Kalhor', 6, 110000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Numblequick and the bogeyman', 'Hamid Abazari', 'Maryam Tahmasebi', 'Ch', 44, 'Mojgan Kalhor', 2, 28000, 'no');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Ace', 'Payam Ebrahimi', 'Reza Dalvand', 'Ch', 32, 'Mojgan Kalhor', 6, 185000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('A forest for everyone', 'Nazanin Abbasi', 'Alireza Allaedini', 'Ch', 48, 'Mojgan Kalhor', 6, 160000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Taxi for the honorable chickens', 'Ahmad Akbarpour', 'Mahnaz Soleymannejad', 'YA', 60, 'Mojgan Kalhor', 2, 85000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Beyond the sea of the dead', 'Masoume Miraboutalebi', 'Pejman Rahimizade', 'YA', 196, 'Mohammad Hadi Ghavipishe', 2, 180000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('Edson Arantes Do Nascimento and his Himalayan rabbit', 'Jamshid Khanyan', 'Pejman Rahimizade', 'YA', 92, 'Mohammad Hadi Ghavipishe', 2, 110000, 'yes');

INSERT INTO books(title, writer, illustrator, age_category, pages, editor, edition, price, availability) VALUES ('The thousand woodpecker valley', 'Azam Mahdavi', 'Sahar Daneshi', 'Ch', 32, 'Mojgan Kalhor', 1, 28000, 'yes');

With this command we are going to delete a row from the table where the editor's name is Mohammad Hadi Ghavipishe

```
DELETE
FROM books
WHERE editors='Mohammad Hadi Ghavipishe'
```

To update the writer's name with Shabnam Heidaripour where the title is Wedding with the sun we use the code below:

```
UPDATE books
```

```
SET writer='Shabnam Heidaripour'
WHERE title='Wedding with the sun'
```

We want to see only a table of the name of write, illustrator and edition, we use the below code:

```
SELECT writer,illustrator,edition
FROM books
```

To have a table with writer,illustrator and edition only for the available books we use the below code:

```
SELECT writer,illustrator,edition
FROM books
WHERE availability='yes'
```

We select all the columns from books table where they are available.
We ordered the rows based on the writers' names in an ascendant manner.

```
SELECT *
FROM books
WHERE availability='yes'
ORDER BY writer ASC
```

With this code we are going to delete the table:

```
DROP TABLE books
```