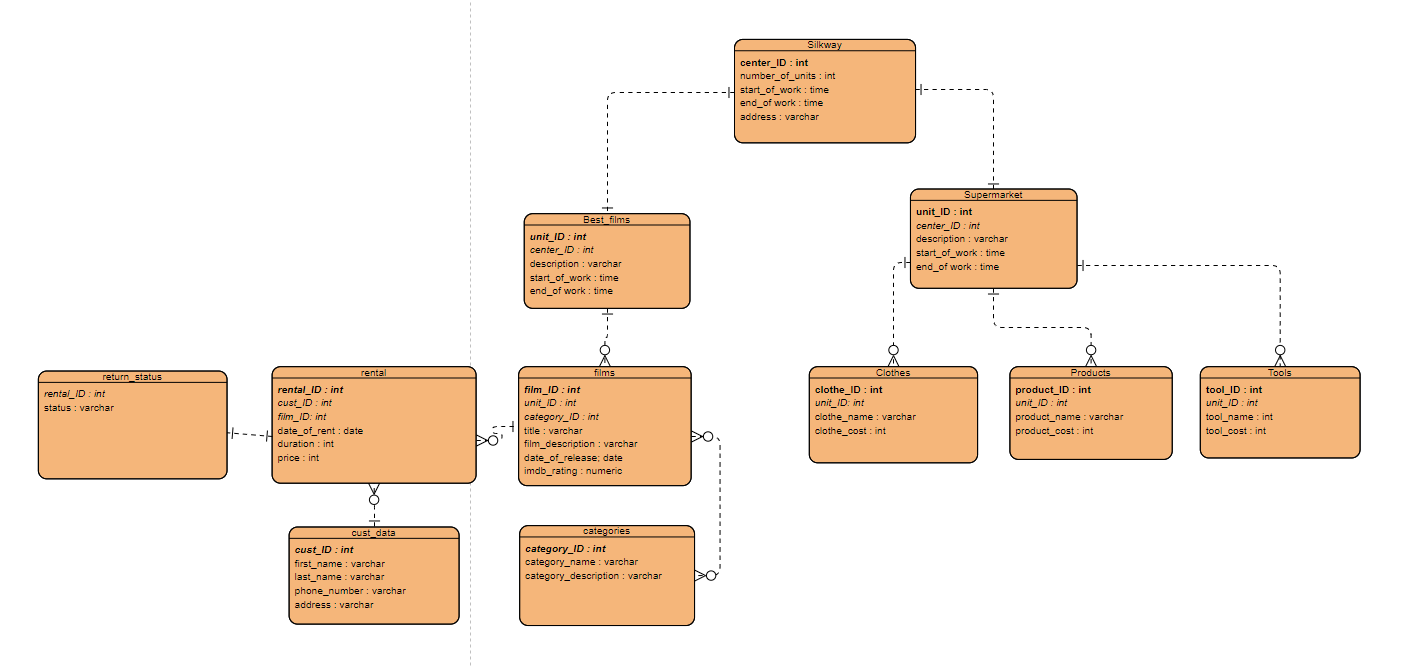
1. **Create ERD**



1. **Create database**

create table SILKWAY

(

center\_id INT primary key,

number\_of\_units INT,

start\_of\_work TIME,

end\_of\_work TIME,

address VARCHAR(32)

);

create table BEST\_FILMS

(

unit\_id INT primary key,

center\_id INT,

description VARCHAR(255),

start\_of\_work TIME,

end\_of\_work TIME,

FOREIGN KEY (center\_id)

REFERENCES SILKWAY (center\_id)

);

create table categories

(

category\_id INT primary key,

category\_name VARCHAR(255),

category\_description VARCHAR

);

create table films

(

film\_id INT primary key,

unit\_id INT,

category\_id INT,

title VARCHAR(255),

film\_description VARCHAR,

date\_of\_release VARCHAR,

imdb\_score NUMERIC,

FOREIGN KEY (unit\_id)

REFERENCES BEST\_FILMS (unit\_id),

FOREIGN KEY (category\_id)

REFERENCES categories (category\_id)

);

create table cust\_data

(

cust\_id INT primary key,

first\_name VARCHAR(255),

last\_name VARCHAR(255),

phone\_number VARCHAR(255),

address VARCHAR

);

create table rental

(

rental\_id INT primary key,

cust\_id INT,

film\_id INT,

date\_of\_rent DATE,

duration INT,

price INT,

FOREIGN KEY (film\_id)

REFERENCES films (film\_id),

FOREIGN KEY (cust\_id)

REFERENCES cust\_data (cust\_id)

);

create table return\_status

(

rental\_id INT primary key,

status VARCHAR(255),

FOREIGN KEY (rental\_id)

REFERENCES rental (rental\_id)

);

create table supermarket

(

unit\_id INT primary key,

center\_id INT,

description VARCHAR,

start\_of\_work TIME,

end\_of\_work TIME,

FOREIGN KEY (center\_id)

REFERENCES SILKWAY (center\_id)

);

create table clothes

(

clothe\_id INT primary key,

unit\_id INT,

clothe\_name VARCHAR(255),

clothe\_cost INT,

FOREIGN KEY (unit\_id)

REFERENCES supermarket (unit\_id)

);

create table products

(

product\_id INT primary key,

unit\_id INT,

product\_name VARCHAR(255),

product\_cost INT,

FOREIGN KEY (unit\_id)

REFERENCES supermarket (unit\_id)

);

create table tools

(

tool\_id INT primary key,

unit\_id INT,

tool\_name VARCHAR(255),

tool\_cost INT,

FOREIGN KEY (unit\_id)

REFERENCES supermarket (unit\_id)

);

1. **Write 5 different ALTER TABLE statements**

ALTER TABLE tools

ADD Description VARCHAR;

ALTER TABLE tools

DROP column description;

1. **Write SQL query for DML statement**

**INSERT**

insert into

silkway (center\_id, number\_of\_units, start\_of\_work, end\_of\_work, address)

values

(2,2,'08:00','20:00', 'Kabanbai Batyr 62');

insert into

supermarket (unit\_id, center\_id, description, start\_of\_work, end\_of\_work)

values

(1,2,'A supermarket is a self-service shop offering a wide variety of food, beverages and household products, organized into sections','08:15', '19:45');

insert into

tools (tool\_id, unit\_id, tool\_name, tool\_cost)

values

(1,1,'pencil',100),

(2,1,'pen',200),

(3,1,'screwdriver',1500),

(4,1,'lock',800),

(5,1,'knife',500),

(6,1,'drill',5000),

(7,1,'hammer',1200),

(8,1,'paintbrush',500),

(9,1,'ruler',350),

(10,1,'sharpener',150);

insert into

products (product\_id, unit\_id, product\_name, product\_cost)

values

(1,1,'apple',90),

(2,1,'banana',120),

(3,1,'wine',2090),

(4,1,'onion',160),

(5,1,'fish',1050),

(6,1,'bread',70),

(7,1,'chicken',1200),

(8,1,'souce',465),

(9,1,'gum',240),

(10,1,'chips',570);

insert into

clothes (clothe\_id, unit\_id, clothe\_name, clothe\_cost)

values

(1,1,'pants',5700),

(2,1,'t-shirt',6180),

(3,1,'hat',4320),

(4,1,'socks',2500),

(5,1,'sneakers',8000),

(6,1,'glasses',1700),

(7,1,'coat',9600),

(8,1,'panties',7940),

(9,1,'jacket',7410),

(10,1,'skirt',9635);

insert into

categories (category\_id, category\_name, category\_description)

values

(1,'fantastic','The fantastic is present in works where the reader experiences hesitation about whether a work presents what Todorov calls "the uncanny", wherein superficially supernatural phenomena turn out to have a rational explanation (such as in the Gothic works of Ann Radcliffe) or "the marvelous", where the supernatural is confirmed by the story.'),

(2,'drama','Drama is a category of narrative fiction (or semi-fiction) intended to be more serious than humorous in tone.'),

(3,'fantasy','Fantasy is a genre of speculative fiction set in a fictional universe, often inspired by real world myth and folklore.'),

(4,'adventure','Adventure fiction is a genre of fiction that usually presents danger, or gives the reader a sense of excitement.'),

(5,'biography','A biography, or simply bio, is a detailed description of a persons life.'),

(6,'melodrama','In modern usage, a melodrama is a dramatic work wherein the plot, which is typically sensational and designed to appeal strongly to the emotions, takes precedence over detailed characterization.'),

(7,'comedy','Comedy is any work that is intended to incite laughter and amusement, especially in theatre, television, film, stand-up comedy or any other entertainment medium.'),

(8,'family','Family film is a genre of film production that is designed for interested perception by different age groups of both sexes at the same time, and thus is suitable for watching the film with the whole family.'),

(9,'cartoon','A film made with the help of animation means, that is, frame-by-frame recording of volumetric and flat images created by the artist or objects of the real-world world on film and video tape or on digital media.'),

(10,'crime','It is a film genre inspired by and analogous to the crime fiction literary genre. Films of this genre generally involve various aspects of crime and its detection.');

insert into

films (film\_id, unit\_id, category\_id,title,film\_description,date\_of\_release,imdb\_score)

values

(1,2,10,'The Green Mile','A prisoner with a divine gift appears in the death row. Mystical drama based on the novel by Stephen King',1999,9.0),

(2,2,2,'The Shawshank Redemption','Trapped in a prison called Shawshenko, Andy Dufraim is faced with the brutality and lawlessness that reigns on both sides of the bars. Everyone who falls into these walls becomes their slave for the rest of their lives. But Andy, with a lively mind and a kind soul, finds an approach to both prisoners and guards, seeking their special favor',1994,8.9),

(3,2,3,'The Lord of the Rings: The Return of the King','The last part of the trilogy about the Ring of Omnipotence and about the heroes who took on the burden of saving Middle-earth',2003,8.8),

(4,2,1,'Interstellar','A fantastic epic about a choking Earth, space flights and paradoxes of time. Oscar for special effects',2014,8.8),

(5,2,5,'Schindlers List','A drama about the Holocaust and a great human act',1993,8.7),

(6,2,4,'The Lord of the Rings: The Fellowship of the Ring','Tales of Middle-earth chronicles the Great War of the Ring, a war that lasted for thousands of years. The one who owned the Ring received power over all living things, but was obliged to serve evil.',2001,8.7),

(7,2,6,'Forrest Gump','Tom Hanks fulfills the American dream',1994,8.7),

(8,2,3,'The Lord of the Rings: The Two Towers','The Brotherhood has disintegrated, but the Ring of Omnipotence must be destroyed. Frodo and Sam are forced to entrust their lives to Gollum, who undertook to lead them to the gates of Mordor. The immense Army of Saruman is approaching: the members of the brotherhood and their allies are ready to fight. The battle for Middle-earth continues',2002,8.7),

(9,2,7,'Intouchables','Former convict restores a taste for life to a prim aristocrat chained to a wheelchair',2011,8.7),

(10,2,9,'Klaus','The owner of the postal empire, in order to teach a lazy offspring named Jesper wisdom, sends him to the far north in the city of Smirensburg',2019,8.6);

insert into

cust\_data (cust\_id, first\_name, last\_name, phone\_number, address)

values

(1, 'Nessa', 'Balfour', '995-852-0894', '55398 Lakewood Gardens Circle'),

(2, 'Olympie', 'Croster', '289-147-4779', '79169 Mitchell Avenue'),

(3, 'Poul', 'Piatek', '226-747-7462', '76288 Gateway Plaza'),

(4, 'Louie', 'De Bruijne', '521-416-1156', '7829 Center Place'),

(5, 'Kelcey', 'Bacher', '589-127-1167', '090 Elgar Hill'),

(6, 'Court', 'Donnel', '927-561-0196', '7638 Ridgeview Drive'),

(7, 'Olimpia', 'Tickel', '206-129-1162', '04809 Logan Alley'),

(8, 'Netty', 'Yeskov', '448-636-3544', '70 Texas Hill'),

(9, 'Dusty', 'Nethercott', '577-943-4431', '7 Forest Way'),

(10, 'Winnie', 'Verrier', '938-857-9099', '58879 Fairview Junction');

insert into

return\_status (rental\_id, cust\_id, film\_id, date\_of\_rent, duration, price)

values

(1, 3, 9, '2020-10-03', 16, 2000),

(2, 6, 9, '2020-10-27', 5, 500),

(3, 5, 2, '2020-11-07', 12, 1000),

(4, 10, 10, '2020-10-12', 7, 1000),

(5, 10, 5, '2020-10-25', 6, 500),

(6, 4, 1, '2020-11-05', 21, 4000),

(7, 10, 8, '2020-10-04', 2, 500),

(8, 1, 6, '2020-10-21', 13, 1000),

(9, 7, 3, '2020-10-10', 17, 2000),

(10, 3, 3, '2020-10-07', 3, 500);

insert into

return\_status (rental\_id, status)

values

(1, 'Returned'),

(2, 'Returned'),

(3, 'Not returned'),

(4, 'Returned'),

(5, 'Returned'),

(6, 'Not returned'),

(7, 'Returned'),

(8, 'Returned'),

(9, 'Returned'),

(10, 'Returned');

**UPDATE**

UPDATE return\_status

SET status = 'Not returned'

WHERE rental\_id = 8;

UPDATE cust\_data

SET first\_name = 'Nick'

WHERE first\_name = 'Dusty';

UPDATE films

SET category\_id = 4

WHERE film\_id = 8;

UPDATE films

SET category\_id = 4

WHERE film\_id = 3;

UPDATE tools

SET tool\_name = 'eraser'

WHERE tool\_cost = (select min(tool\_cost) from tools)

ALTER TABLE tools

ADD Description VARCHAR;

ALTER TABLE tools

DROP column description;

**DELETE**

DELETE FROM products

WHERE product\_cost = (select min(product\_cost) from products);

DELETE FROM products

WHERE product\_cost = (select min(product\_cost) from products);

DELETE FROM products

WHERE product\_cost = (select min(product\_cost) from products);

**5.**

SELECT first\_name, last\_name

from cust\_data

join rental on cust\_data.cust\_id = rental.cust\_id

join return\_status on return\_status.rental\_id = rental.rental\_id

WHERE return\_status.status = 'Not returned';

SELECT sum(price) as total\_income

from rental;

select AVG(tool\_cost)

from tools;

select title, categories.category\_name

from films join categories on films.category\_id = categories.category\_id;

select distinct rental.cust\_id, cust\_data.first\_name, cust\_data.last\_name

from rental join cust\_data on rental.cust\_id = cust\_data.cust\_id

ORDER BY cust\_id ASC

**6.**

select title

from films join categories on films.category\_id = categories.category\_id

where films.category\_id = (select category\_id from films where film\_id = 6);