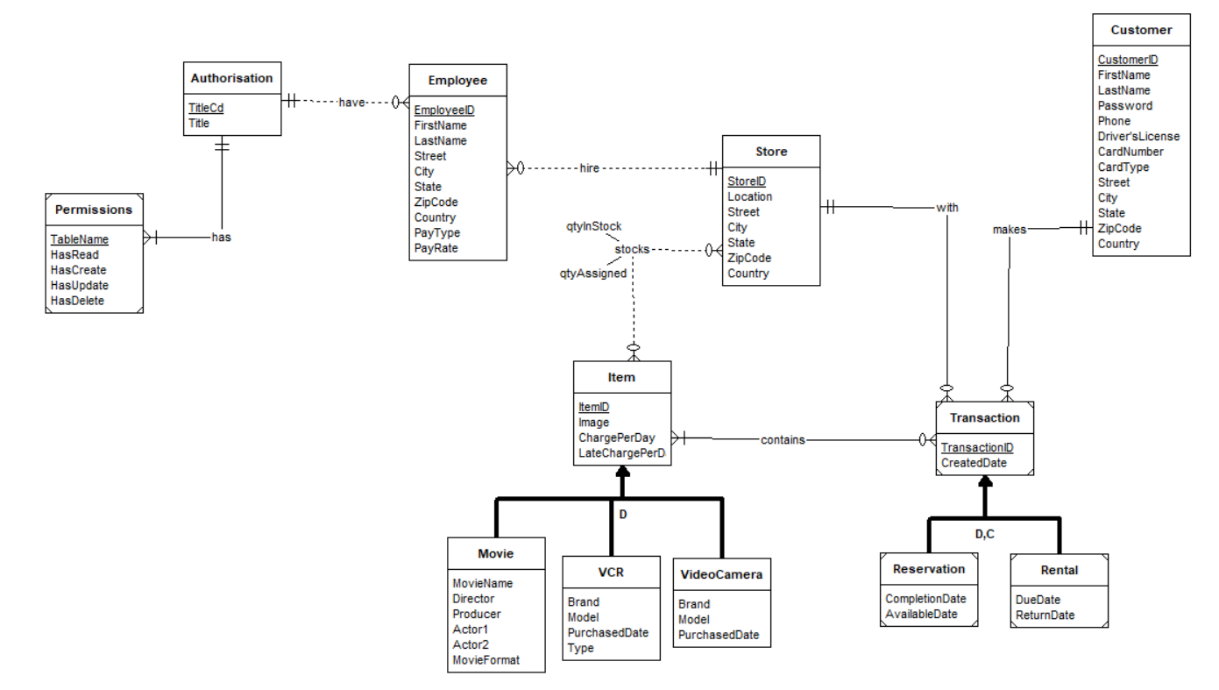
# Submission Template

**Entity Relationship Diagram** ****

**Database Diagram from SQL Server after tables creation with PK and FK **

**Database Design Explanation**

List all the tables and their fields. Indicate the PK and FK and their referenced tables.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table** | **Purpose** | **Field** | **DataType** | **Primary**  **Key** | **Foreign**  **Key** |
| Item\_types | Lookup table containing item types for items | *Item\_type\_cd* | Varchar(5) | *Item\_type\_cd* | *nil* |
| *Item\_type* | Varchar(50) |
| Late*\_*charges | Lookup table containing late charges for items | *Late\_charge\_cd* | varchar(5) | *Late\_charge\_cd* | *Nil* |
| *Late\_chage\_type* | Varchar(20) |
| *Late\_charge\_per\_day* | Decimal(13,4) |
| Items | Contains shared attributes of items that the stores provide for rental. | *item\_id* | Int | *Item\_id* | Item\_type\_cd references item\_types item\_type\_cd |
| *item\_type\_cd* | varchar(5) |
| *Charge\_per\_day* | Decimal(13,4) | Late\_charge\_cd references late\_charges late\_charge\_cd |
| *Late\_charge\_cd* | Varchar(5) |
| *image* | Varchar(255) |
| vcr | Contains additional details about VCR items that the stores provide for rental | *Item\_id* | Int | *Item\_id* | Item\_id references items item\_id |
| *Brand* | Varchar(20) |
| *model* | Varchar(50) |
| *Purchased\_date* | Date |
| *Vcr\_type* | Varchar(20) |
| Video\_camera | Contains additional details about Video Camera items that the stores provide for rental | *Item\_id* | Int | Item\_id | Item\_id references items item\_id |
| *Brand* | Varchar(20) |
| *Model* | Varchar(50) |
| *Purchased\_date* | date |
| movies | Contains additional details about Movie items that the stores provide for rental | *Item\_id* | Int | Item\_id | Item\_id references items item\_id |
| *Movie\_name* | Varchar(100) |
| *Director* | Vachar(50) |
| *Producer* | Vachar(50) |
| *Actor1* | Vachar(50) |
| *Actor2* | Vachar(50) |
| *Genre* | Varchar(20) |
| *Movie\_format* | Varchar(20) |
| Stores | Contains details about the company’s stores | *Store\_id* | Int | Store\_id | nil |
| *Location* | Varchar(20) |
| *Street* | Varchar(50) |
| *City* | Varchar(50) |
| *State* | Varchar(20) |
| *Zip\_code* | Char(5) |
| *country* | Varchar(50) |
| Store\_item\_catalogue | Contains information about the number of assigned and in stock items for each store | *Store\_id* | Int | (Store\_id, item\_id) | Store\_id references stores store\_id |
| *Item\_id* | Int |
| *Qty\_in\_stock* | Int | Item\_id references items item\_id |
| *Qty\_assigned* | int |
| customers | Contains details about customers | *Customer\_id* | Int | Customer\_id | nil |
| *First\_name* | Varchar(50) |
| *Last\_name* | Varchar(50) |
| *Password* | Varchar(100) |
| *Phone* | Varchar(15) |
| *Divers\_license* | Varchar(255) |
| *Card\_number* | Varchar(20) |
| *Street* | Varchar(50) |
| *City* | Varchar(50) |
| *State* | Varchar(20) |
| *Zip\_code* | Char(5) |
| *country* | Varchar(50) |
| rentals | Contains information about rentals customers make with stores | *Rental\_id* | Int | Rental\_id | Store\_id references stores store\_id |
| *Store\_id* | Int |
| *Customer\_id* | Int |
| *Created\_date* | Date | Customer\_id references customers customer\_id |
| *Due\_date* | Date |
| *Return\_date* | Date |
| Rental\_items | CContains which items are rented out in rental transactions | *Rental\_id* | Int | (Rental\_id, item\_id) | Rental\_id references rentals rental\_id |
| *Item\_id* | int | Item\_id references items item\_id |
| reservations | CContains information about reservations customers make with stores | *Reservation\_id* | Int | Reservation\_id | Store\_id references stores store\_id |
| *Store\_id* | Int |
| *Customer\_id* | Int | Customer\_id references customers customer\_id |
| *Created\_date* | int |
| Reservation\_items | Contains which items are reserved in rental transactions and dates such as when the item comes back in stock and when those items are either collected or cancelled from the reservation | *Reservation\_id* | Int | (Reservation\_id, item\_id) | Reservation\_id references reservations reservation\_id |
| *Item\_id* | int |
| *Completion\_date* | date | Item\_id references items item\_id |
| *Available\_date* | date |
| Pay\_types | Lookup table containing pay types for employees | *Pay\_cd* | Varchar(5) | Pay\_cd | nil |
| *Pay\_title* | Varchar(50) |
| *Pay\_rate* | Decimal(13,4) |
| Auth\_role | Lookup table containing authorization roles for employees | *Auth\_cd* | Varchar(5) | Auth\_cd | nil |
| *Auth\_title* | Varchar(50) |
| Auth\_permissions | Contains permissions to view, modify and delete data that each authorization role has | *Auth\_cd* | Varchar(5) | (Auth\_cd, table\_name) | Auth\_cd references auth\_roles auth\_cd |
| *Table\_name* | Varchar(50) |
| *Has\_read* | Bit |
| *Has\_create* | Bit |
| *Has\_update* | Bit |
| *Has\_delete* | bit |
| Employees | Contains details about employee, including the store they work in, their pay rate and their authorization access | *Employee\_id* | Int | Employee\_id | Auth\_cd references auth\_roles auth\_cd  Pay\_cd refernces pay\_types  Pay\_cd  Store\_id references stores store\_id |
| *First\_name* | Varchar(50) |
| *Last\_name* | Varchar(50) |
| *Street* | Varchar(50) |
| *City* | Varchar(50) |
| *State* | Varchar(20) |
| *Zip\_code* | Char(5) |
| *country* | Varchar(50) |
| *Auth\_cd* | Varchar(5) |
| *Pay\_cd* | Varchar(5) |
| *Store\_id* | int |

Table – Name the table

Purpose – State what the table is used for and contains what details Field – List all the columns of the table

DataType – State varchar, integer, decimal etc Primary Key – List the PK (Simple or Composite)

Foreign Key – List the FK (Simple or Composite) and its reference table

**SQL Queries and Results**

|  |  |
| --- | --- |
| Query 1 | Query 1 Results |
|  |  |
| Query 2(i) | Query 2(i) Results |
|  |  |
| Query 2(ii) | Query 2(ii) Results |
|  |  |
| Query 3 | Query 3 Results |
|  |  |
| Query 4 | Query 4 Results |
|  |  |
| Query 5 | Query 5 Results |
|  |  |
| Query 6 | Query 6 Results |
|  |  |