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**1.Entities and Attributes Used**

1. **Movie Entity and Attributes**

|  |  |
| --- | --- |
| Id | INT Primary Key |
| Movie\_title | Varchar(10) |
| Genre | varchar(50) |
| duration | INT(10) |
| language | varchar(50) |
| dimension\_type | varchar(10) |
| format | varchar(10) |
|  |  |

1. **Theatre Entity and it’s Attributes**

|  |  |
| --- | --- |
| Id | INT |
| Name | Varchar(200) |
| Location | Varchar(50) |
| City | Varchar(50) |

1. **Shows Entity and it’s attributes**

|  |  |  |
| --- | --- | --- |
| id | INT Primary Key | |
| Theatre\_id | INT Foreign Key References Theatre | |
| Movie\_id | INT Foreign Key References Movie | |
| show\_time | **JSON (list of show timings)** | |
| Date | Date | |
|  |  | |
|  | |

**2. Table Creation (Schema)**

**a.movie table schema**

**CREATE TABLE IF NOT EXISTS `movie` (**

**`id` int NOT NULL AUTO\_INCREMENT,**

**`Movie\_title` varchar(200) NOT NULL,**

**`genre` varchar(50) NOT NULL,**

**`duration` int NOT NULL,**

**`language` varchar(50) NOT NULL,**

**`dimension\_type` varchar(10) NOT NULL DEFAULT '2D',**

**`format` varchar(10) NOT NULL,**

**PRIMARY KEY (`id`)**

**);**

**b. theatre table schema**

**CREATE TABLE IF NOT EXISTS `theatre` (**

**`id` int NOT NULL,**

**`Name` varchar(200) NOT NULL,**

**`Location` varchar(50) NOT NULL,**

**`City` varchar(50) NOT NULL,**

**PRIMARY KEY (`id`)**

**);**

1. **Shows table schema**

**CREATE TABLE IF NOT EXISTS `shows` (**

**`id` int NOT NULL,**

**`Theatre\_id` int NOT NULL,**

**`Movie\_id` int NOT NULL,**

**`show\_time` json NOT NULL,**

**`Date` date NOT NULL,**

**PRIMARY KEY (`id`),**

**KEY `Theatre` (`Theatre\_id`),**

**KEY `Movie` (`Movie\_id`)**

**);**

**3. sample data rows**

**a. movie**

**INSERT INTO `movie` (`id`, `Movie\_title`, `genre`, `duration`, `language`, `dimension\_type`, `format`) VALUES**

**(1, 'UI', 'psychology', 184, 'kannada', '2D', '4K'),**

**(2, 'Max', 'action', 152, 'kannada', '2D', '4K'),**

**(3, 'Pushpa2', 'action', 184, 'Telugu', '2D', '2K'));**

**b. theatre**

**INSERT INTO `theatre` (`id`, `Name`, `Location`, `City`) VALUES**

**(1, 'Cinepolis Meenakshi Mall', 'Hulimav', 'Bangalore'),**

**(2, 'Siddeshwara', 'JP Nagara', 'Bangalore'),**

**(3, 'PVR Nexux Mall', 'Kormangala', 'Bangalore'),**

**(4, 'Lido Mall', 'Mandi Mohalla', 'Mysore'));**

**c. shows**

**INSERT INTO `shows` (`id`, `Theatre\_id`, `Movie\_id`, `show\_time`, `Date`) VALUES**

**(1, 1, 1, '[\"19:15:00\", \"19:30:00\", \"22:15:00\", \"22:30:00\"]', '2024-12-25'),**

**(2, 1, 1, '[\"19:15:00\", \"19:30:00\", \"22:15:00\", \"22:30:00\"]', '2024-12-26'),**

**(3, 1, 1, '[\"19:15:00\", \"19:30:00\", \"22:15:00\"]', '2024-12-27'),**

**(4, 1, 1, '[\"19:15:00\", \"19:30:00\"]', '2024-12-28'),**

**(5, 1, 1, '[\"19:15:00\", \"19:30:00\"]', '2024-12-29'),**

**(6, 1, 1, '[\"19:15:00\", \"19:30:00\"]', '2024-12-30'));**

4.  Write a query to list down all the shows on a given date at a given theatre along with their respective show timings.

**Solution:**

**SELECT s.date AS Movie\_dates,**

**t.name AS theatre\_name,**

**m.language AS Movie\_Language**

**m.genre AS genres,**

**m.Movie\_title,**

**m.format AS movie\_format,**

**m.dimension\_type,**

**s.show\_time AS show\_timings**

**FROM shows AS s**

**JOIN**

**movie AS m**

**ON m.id = s.Movie\_id**

**JOIN theatre AS t**

**ON t.id=s.Theatre\_id**

**WHERE t.Name=:theatre\_name AND s.date =:show\_date;**

**Note :** In the above query , :theatre\_name and :show\_date represents Query Params by user. Use wisely to hardcode as theatre name and date with quotes to get the results.