

Dr. Kashif Qazi  
Database Project Phase 4  
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Note\* The table EM\_CAST was removed from the database.

### **Introduction**

(Explain the problem) Our project involves designing a database system for Netflix to manage various aspects of its operations including employees, departments, customers, games, movies, and TV shows.

(Setup) The database will store information such as employee details, department budget and roles, customer details, game information, and movie and TV show details including ratings, cast, and director information.

This database is to store and manage information related to the operations of Netflix, a company that provides streaming services for movies, TV shows, and games to its customers.

### **Entity Types and Relationships**

**Employee:** This table in the database stores information about a person who works at Netflix such as their SSN, full name, phone number, email address, gender, home address, salary, position, clearance level, time at the company, and supervisor. Every employee belongs to a department and it is stored in the database as the ID of that department. An employee may also have a connection with a customer that they have helped, kind of like a recording feature that allows the company to keep track of which employee had a conversation with a customer for quality assurance.

**Department:** This table in the database stores information about a department name, Budget, Role, and every department has a unique ID. Every department has a manager and it is stored in the database as the manager's SSN. A department cannot exist without any employees. Each department manages different aspects of the company including movies and tv shows along with games. It is also possible for multiple departments to manage movies and tv shows.

**Customer:** This table in the database stores information about a customer who has created an account with Netflix such as their full name, subscription type, address, IP address, email, phone number, country, and password. Upon the creation of a new account, the system will generate a unique ID for that account which is also stored in the database. A valid email and password that the user has entered, which also exist in the database will be used as login information. Based on the customer's IP address they will be assigned a country.

**Game:** The Game table stores information about games that Netflix published. It stores the game id, name, size, studio, genre, and the department responsible for its development. Netflix partners with game development studios to create the games they publish and the games are

managed by a department. The customer is allowed to play these games and records which customer and how many times they have played the game.

**Director:** The director table stores information about directors including their name, age, and country. The directors from the table could have either directed a movie or tv show.

**Movies:** The Movie table stores information about movies including movie id, name, length, genre, size, if it's a Netflix original, and the department responsible for its production. Customers can watch and rate movies that they liked or didn't like. A movie also references the Director table to connect who was the director of what movie.

**TV shows:** The TV show table stores information about TV shows including show id, name, genre, size, episode count, if it's a Netflix original, and the department responsible for its production. Just like movies, customers can watch and rate tv shows. The Director of the tv show also references the director's table.

## Data we used:

ssn	first_name	last_name	phone	email	sex	t_company	salary	address	dob	position	clearance_level	D_id	S_ssn
111-11-1111	John	Doe	123-456-7890	john.doe@gmail.com	M	ABC Company	\$6000.00	123 Main St, Anytown, USA	1999-01-01	Software Engineer	2	D002	NULL
111-11-1112	Samantha	Johson	111-222-3334	samantha.johnson@gmail.com	F	ABC Company	\$6500.00	456 Main St, Anytown, USA	1999-05-18	Software Engineer	2	D002	NULL
111-11-1113	William	Brown	123-456-7891	william.brown@gmail.com	M	ABC Company	\$5500.00	456 Oak St, Anytown, USA	1993-04-05	Software Engineer	2	NULL	NULL
222-22-2223	Robert	Williams	555-555-5556	robert.williams@gmail.com	M	XYZ Inc.	\$8000.00	789 Oak St, Anytown, USA	1980-09-28	Manager	3	D003	NULL
222-22-2224	Michael	Davis	222-333-4445	michael.davis@gmail.com	M	ABC Company	\$7500.00	345 Main St, Anytown, USA	1985-07-15	Senior Engineer	3	NULL	NULL
222-22-2225	John	Medinez	111-222-3335	john.medinez@gmail.com	M	XYZ Inc.	\$7000.00	789 Elm St, Anytown, USA	1980-09-28	Manager	3	NULL	NULL
333-33-3332	Bob	Smith	555-555-5555	bob.smith@gmail.com	M	DEF Corporation	\$6000.00	123 Oak St, Anytown, USA	1988-11-15	Marketing Analyst	1	D004	NULL
333-33-3333	Jennifer	Lee	333-333-3333	jennifer.lee@gmail.com	F	DEF Corporation	\$7000.00	123 Maple St, Anytown, USA	1983-09-01	Marketing Manager	2	D002	NULL
333-33-3335	Tyler	Davis	333-333-3334	tyler.davis@gmail.com	M	DEF Corporation	\$6500.00	123 Pine St, Anytown, USA	1990-08-18	Marketing Coordinator	1	NULL	NULL
444-44-4444	Alice	Johnson	111-222-3333	alice.johnson@gmail.com	F	GHI Industries	\$8000.00	321 Elm St, Anytown, USA	1980-09-28	Senior Engineer	4	D005	NULL
444-44-4445	Mark	Jones	111-222-3335	mark.jones@gmail.com	M	GHI Industries	\$8000.00	321 Elm St, Anytown, USA	1980-09-28	Senior Engineer	5	NULL	NULL
444-44-4446	Olivia	Wilson	111-222-3336	olivia.wilson@gmail.com	F	GHI Industries	\$8000.00	321 Oak St, Anytown, USA	1984-05-12	Senior Engineer	2	NULL	NULL
555-55-5555	David	Lee	444-444-4444	david.lee@gmail.com	M	ABC Company	\$6500.00	567 Maple St, Anytown, USA	1995-02-28	Junior Engineer	1	D004	NULL
555-55-5556	Matthew	Nguyen	444-444-4445	matthew.nguyen@gmail.com	M	ABC Company	\$6000.00	789 Pine St, Anytown, USA	1991-11-20	Junior Engineer	1	NULL	NULL
666-66-6666	Emily	Wong	777-777-7777	emily.wong@gmail.com	F	XYZ Inc.	\$7000.00	234 Oak St, Anytown, USA	1983-09-01	Project Manager	3	D003	NULL
666-66-6667	Ben	Chen	777-777-7778	ben.chen@gmail.com	M	XYZ Inc.	\$7000.00	234 Elm St, Anytown, USA	1980-09-28	Project Manager	4	NULL	NULL
777-77-7777	Tom	Jones	222-333-3334	tom.jones@gmail.com	M	DEF Corporation	\$5500.00	981 Pine St, Anytown, USA	1992-05-18	Marketing Coordinator	1	D004	NULL
777-77-7778	Ryan	Lee	222-333-3344	ryan.lee@gmail.com	M	DEF Corporation	\$5500.00	981 Oak St, Anytown, USA	1994-01-10	Marketing Analyst	1	NULL	NULL
888-88-8888	Linda	Garcia	999-888-7777	linda.garcia@gmail.com	F	GHI Industries	\$8500.00	345 Oak St, Anytown, USA	1978-12-25	Senior Manager	4	D005	NULL
888-88-8889	Sarah	Smith	999-888-7778	sarah.smith@gmail.com	F	GHI Industries	\$7500.00	345 Maple St, Anytown, USA	1987-08-12	Project Manager	3	NULL	NULL

20 rows in set (0.06 sec)

account_number	Fname	Lname	sub_type	address	ISP	email	phone	country	password
01234567800	Grace	Allen	Premium	753 Oak St, Anytown USA	Optimum	graceallen@gmail.com	555-912-3457	USA	pass708
0123456789	Olivia	Allen	Premium	951 Main St, Anytown USA	Optimum	oliviasallen@gmail.com	555-012-3456	USA	pass707
1112223333	Rachel	Johnson	Basic	678 Wilson St, Anytown USA	Verizon	racheljohnson@gmail.com	347-878-9123	USA	pass001
1234567890	John	Doe	Basic	123 Main St, Anytown USA	Comcast	john doe@gmail.com	555-123-4567	USA	pass123
1234567891	Chris	Brown	Basic	852 Oak St, Anytown USA	Comcast	chrishbrown@gmail.com	555-123-4568	USA	pass124
2345678901	Jane	Smith	Premium	456 Elm St, Anytown USA	Verizon	janesmith@gmail.com	555-234-5678	USA	pass456
2345678902	Ashley	Johnson	Premium	753 Pine St, Anytown USA	Verizon	ashleyjohnson@gmail.com	555-234-5679	USA	pass457
3456789012	Bob	Johnson	Basic	789 Oak St, Anytown USA	AT&T	bobjohnson@gmail.com	555-345-6789	USA	pass789
3456789013	Mark	Miller	Basic	654 Elm St, Anytown USA	AT&T	markmiller@gmail.com	555-345-6790	USA	pass790
4567890123	Emily	Davis	Premium	321 Pine St, Anytown USA	Charter	emilydavis@gmail.com	555-456-7890	USA	pass101
4567890124	Caroline	Lee	Premium	555 Main St, Anytown USA	Charter	carolinelee@gmail.com	555-456-7891	USA	pass102
5678901234	Michael	Wilson	Basic	654 Maple St, Anytown USA	Cox	michaelwilson@gmail.com	555-567-8901	USA	pass202
5678901235	Alex	Wilson	Basic	456 Cedar St, Anytown USA	Cox	alexwilson@gmail.com	555-567-8902	USA	pass203
6789012345	Sarah	Brown	Premium	987 Cedar St, Anytown USA	Spectrum	sarahbrown@gmail.com	555-678-9812	USA	pass303
6789012346	Jessica	Smith	Premium	357 Oak St, Anytown USA	Spectrum	jessicasmith@gmail.com	555-678-9813	USA	pass304
7890123456	David	Lee	Basic	147 Oak St, Anytown USA	Xfinity	davidlee@gmail.com	555-789-0123	USA	pass404
7890123457	Luke	Davis	Basic	258 Pine St, Anytown USA	Xfinity	luke.davis@gmail.com	555-789-0124	USA	pass405
8901234567	Ava	Taylor	Premium	258 Pine St, Anytown USA	CenturyLink	avataylor@gmail.com	555-890-1234	USA	pass505
8901234568	Madison	Brown	Premium	159 Elm St, Anytown USA	CenturyLink	madisonbrown@gmail.com	555-890-1235	USA	pass506
9812345678	Daniel	Clark	Basic	369 Elm St, Anytown USA	Frontier	daniel.clark@gmail.com	555-901-2345	USA	pass606
9812345679	William	Taylor	Basic	951 Main St, Anytown USA	Frontier	william.taylor@gmail.com	555-901-2346	USA	pass607

20 rows in set (0.00 sec)

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[mysql> select * from department;
+----+-----+-----+-----+-----+
| D_id | D_name          | Budget   | Role           | M_Ssn      |
+----+-----+-----+-----+-----+
| D001 | Software Engineering | 150000.00 | develop Netflix website | 111-11-1111 |
| D002 | Data Scientist     | 150000.00 | Manages data       | 333-33-3333 |
| D003 | Senior Software Engineer | 120000.00 | oversee junior members of the team | 444-44-4444 |
| D004 | Descriptive Analytics | 130000.00 | analyze all data on Netflix | 555-55-5555 |
| D005 | Project Management   | 110000.00 | manages all projects | 666-66-6666 |
| D006 | Marketing            | 101000.00 | represent Netflix positively | 777-77-7777 |
| D007 | Management           | 101000.00 | Manages whole team    | 888-88-8888 |
| D008 | Junior Management    | 90000.00  | Supervisor under supervision of senior manager | 222-22-2223 |
| D009 | Direction             | 100000.00 | directs actors on set | 444-44-4445 |
| D010 | Junior Engineering   | 90000.00  | testing project components | 555-55-5556 |
| D011 | Marketing Analysis   | 190000.00 | gather and analyze data | 777-77-7778 |
+----+-----+-----+-----+-----+
```

```
[mysql> select * from game;
+----+-----+-----+-----+-----+-----+
| game_id | G_name          | size   | studio        | genre      | D_id |
+----+-----+-----+-----+-----+-----+
| 0123456788 | Layas Horizon      | 25.00 | Snowman       | Action/Adventure | D004 |
| 0123456789 | Relic Hunters: Rebels | 100.00 | Rogue Snail   | Action/Role-Playing | D002 |
| 1234567890 | Dust & Neon        | 13.40 | David Marquardt Studios | Action/Role-Playing | D002 |
| 1234567891 | Before Your Eyes    | 62.00 | Goodbye World, Skybount Ent., BKOM | Adventure | D004 |
| 2345678901 | Hextech Mayhem: A League of Legends Story | 99.20 | Riot Games    | Action/Arcade | D002 |
| 2345678902 | Lucky Luna          | 125.60 | Snowman       | Adventure/Arcade | D002 |
| 3456789012 | Poinpy              | 200.00 | Team Poinpy   | Action/Arcade | D003 |
| 3456789013 | Twelve Minutes       | 97.00  | Annapurna Interactive, HuWiz-TwelveMinutes | Adventure | D004 |
| 4567890123 | Tomb Raider Reloaded | 5.40   | Emerald City Games | Action/Adventure | D004 |
| 4567890124 | Bowling Ballers      | 56.00 | Frosty Pop    | Arcade       | D002 |
| 5678901234 | Hello Kitty and Friends: Happiness Parade | 45.00 | Dababu Games and Rohue Games | Music/Arcade | D005 |
| 5678901235 | Arcanum: Rise of Akhan   | 51.50 | Supercombo Inc | Card/Strategy/Role-Playing | D005 |
| 6789012345 | Highwater            | 94.40 | Demagog Studio and Rogue Games | Adventure | D004 |
| 6789012346 | Card Blast            | 0.20  | Amuzo Limited | Card/Puzzle | D005 |
| 7890123456 | Rival Pirates         | 200.00 | Amuzo Limited | Action       | D002 |
| 7890123457 | Dragon Up              | 16.00 | East Side Games | Adventure | D004 |
| 8901234567 | Nailed it! Baking Bash | 8.00  | Paladin Studios | Party/Simulation | D005 |
| 8901234568 | OXENFREE               | 22.00 | Night School Studio | Adventure | D004 |
| 9012345678 | Stranger Things 3: The Game    | 30.20 | BonusXP       | Adventure/Action/Role-Playing | D002 |
| 9012345679 | Skies of Chaos          | 40.00 | Broxcorp Ltd  | Arcade       | D002 |
+----+-----+-----+-----+-----+-----+
```

```
mysql>
mysql> select * from tv_show;
+---+---+---+---+---+---+---+
| S_id | S_name | original | size | ep_number | Dname | genre | D_id |
+---+---+---+---+---+---+---+
| 1 | The Chair | 1 | 6.25 | 6 | Chloé Zhao | Comedy | D002 |
| 10 | Arrival | 0 | 8.12 | 1 | Denis Villeneuve | Science fiction | D003 |
| 11 | Detroit | 1 | 2.76 | 1 | Kathryn Bigelow | Crime drama | D002 |
| 12 | Top of the Lake | 1 | 13.87 | 12 | Jane Campion | Crime drama | D002 |
| 13 | The Party | 1 | 0.49 | 1 | Sally Potter | Comedy-drama | D003 |
| 14 | La Ciénaga | 1 | 1.80 | 1 | Lucrecia Martel | Drama | D005 |
| 15 | Snowfall | 1 | 33.58 | 41 | John Singleton | Crime drama | D003 |
| 16 | True Detective | 1 | 14.76 | 16 | Cary Joji Fukunaga | Crime drama | D002 |
| 17 | The Strain | 1 | 15.97 | 46 | Guillermo del Toro | Horror | D005 |
| 18 | Fargo | 1 | 34.08 | 30 | Joel Coen | Crime drama | D005 |
| 19 | The Ballad of Buster Scruggs | 1 | 2.12 | 6 | Ethan Coen | Western | D003 |
| 2 | CSI | 0 | 75.02 | 337 | Quentin Tarantino | Crime drama | D002 |
| 20 | Chungking Express | 0 | 1.98 | 1 | Wong Kar-wai | Drama-romance | D003 |
| 3 | Julieta Venegas: Parte de mí | 1 | 1.50 | 1 | Pedro Almodóvar | Documentary | D002 |
| 4 | Westworld | 1 | 22.45 | 28 | Christopher Nolan | Science fiction | D005 |
| 5 | Shes Gotta Have It | 1 | 5.13 | 19 | Spike Lee | Comedy-drama | D005 |
| 6 | The Underground Railroad | 1 | 10.85 | 10 | Barry Jenkins | Historical fiction | D003 |
| 7 | On the Rocks | 1 | 0.89 | 1 | Sofia Coppola | Comedy-drama | D002 |
| 8 | American Express | 1 | 3.35 | 10 | Wes Anderson | Comedy | D002 |
| 9 | The Favourite | 1 | 1.80 | 3 | Yorgos Lanthimos | Comedy-drama | D005 |
+---+---+---+---+---+---+---+
```

```
mysql> select * from movie;
+---+---+---+---+---+---+---+
| movie_id | M_name | m_length | Dname | size | genre | original | D_id |
+---+---+---+---+---+---+---+
| M001 | Nomadland | 108 | Chloé Zhao | 4.40 | Drama | 1 | D002 |
| M002 | The Hateful Eight | 187 | Quentin Tarantino | 5.20 | Western | 0 | D002 |
| M003 | Talk to Her | 112 | Pedro Almodóvar | 3.80 | Drama | 1 | D002 |
| M004 | Dunkirk | 106 | Christopher Nolan | 4.60 | War | 1 | D005 |
| M005 | Do the Right Thing | 120 | Spike Lee | 4.30 | Drama | 0 | D005 |
| M006 | Moonlight | 111 | Barry Jenkins | 3.90 | Drama | 1 | D003 |
| M007 | Lost in Translation | 102 | Sofia Coppola | 3.70 | Drama | 1 | D002 |
| M008 | The Grand Budapest Hotel | 100 | Wes Anderson | 4.10 | Comedy | 1 | D002 |
| M009 | The Lobster | 118 | Yorgos Lanthimos | 3.50 | Drama | 0 | D005 |
| M010 | Blade Runner 2049 | 164 | Denis Villeneuve | 4.70 | Science Fiction | 1 | D003 |
| M011 | The Hurt Locker | 131 | Kathryn Bigelow | 4.00 | War | 1 | D002 |
| M012 | The Piano | 121 | Jane Campion | 3.60 | Drama | 1 | D002 |
| M013 | Orlando | 94 | Sally Potter | 3.30 | Drama | 1 | D003 |
| M014 | The Headless Woman | 87 | Lucrecia Martel | 3.20 | Drama | 0 | D005 |
| M015 | Boyz n the Hood | 112 | John Singleton | 3.90 | Drama | 1 | D003 |
| M016 | No Time to Die | 163 | Cary Joji Fukunaga | 4.80 | Action | 1 | D002 |
| M017 | Pans Labyrinth | 118 | Guillermo del Toro | 4.40 | Fantasy | 1 | D005 |
| M018 | The Big Lebowski | 117 | Joel Coen | 3.80 | Comedy | 0 | D005 |
| M019 | Fargo | 98 | Ethan Coen | 3.70 | Crime | 1 | D003 |
| M020 | In the Mood for Love | 98 | Wong Kar-wai | 3.50 | Romance | 1 | D003 |
+---+---+---+---+---+---+---+
20 rows in set (0.00 sec)
```

M_id	A_id	role
M001	A001	Extra
M002	A002	Featured Extra
M003	A003	Supporting
M004	A004	Lead
M005	A005	Extra
M006	A006	Featured Extra
M007	A007	Supporting
M008	A008	Lead
M009	A009	Extra
M010	A010	Featured Extra
M011	A011	Supporting
M012	A012	Lead
M013	A013	Extra
M014	A014	Featured Extra
M015	A015	Supporting
M016	A016	Lead
M017	A017	Extra
M018	A018	Featured Extra
M019	A019	Supporting
M020	A020	Lead

20 rows in set (0.00 sec)

Tv_id	A_id	role
1	A001	Background Actor
10	A010	Guest Star
11	A011	Co-Star
12	A012	Cameo
13	A013	Background Actor
14	A014	Series Regular
15	A015	Recurring
16	A016	Guest Star
17	A017	Co-Star
18	A018	Cameo
19	A019	Background Actor
2	A002	Series Regular
20	A020	Series Regular
3	A003	Recurring
4	A004	Guest Star
5	A005	Co-star
6	A006	Cameo
7	A007	Background Actor
8	A008	Series Regular
9	A009	Recurring

20 rows in set (0.00 sec)

E_Ssn	Dname	Dcountry
777-77-7777	Barry Jenkins	United States
888-88-8889	Cary Joji Fukunaga	United States
111-11-1111	Chloé Zhao	China
555-55-5555	Christopher Nolan	United Kingdom
333-33-3334	Denis Villeneuve	Canada
333-33-3335	Ethan Coen	United States
111-11-1113	Guillermo del Toro	Mexico
444-44-4445	Jane Campion	New Zealand
222-22-2225	Joel Coen	United States
777-77-7778	John Singleton	United States
222-22-2224	Kathryn Bigelow	United States
666-66-6667	Lucrecia Martel	Argentina
444-44-4444	Pedro Almodóvar	Spain
333-33-3333	Quentin Tarantino	United States
555-55-5556	Sally Potter	United Kingdom
888-88-8888	Sofia Coppola	United States
666-66-6666	Spike Lee	United States
111-11-1112	Wes Anderson	United States
444-44-4446	Wong Kar-wai	Hong Kong
222-22-2223	Yorgos Lanthimos	Greece

20 rows in set (0.00 sec)

```
20 rows in set (0.00 sec)

[mysql> select * from m_watch;
+-----+-----+-----+
| cust_number | M_id | stream_count |
+-----+-----+-----+
| 0123456780 | M019 | 200 |
| 0123456789 | M009 | 55 |
| 1112223333 | M020 | 300 |
| 1234567890 | M001 | 10 |
| 1234567891 | M010 | 77 |
| 2345678901 | M002 | 10 |
| 2345678902 | M011 | 88 |
| 3456789012 | M003 | 30 |
| 3456789013 | M012 | 99 |
| 4567890124 | M013 | 45 |
| 5678901234 | M004 | 33 |
| 5678901235 | M014 | 89 |
| 6789012345 | M005 | 90 |
| 6789012346 | M015 | 56 |
| 7890123456 | M006 | 20 |
| 7890123457 | M016 | 65 |
| 8901234567 | M007 | 36 |
| 8901234568 | M017 | 70 |
| 9012345678 | M008 | 44 |
| 9012345679 | M018 | 12 |
+-----+-----+-----+
20 rows in set (0.00 sec)
```

```
[mysql> select * from tv_watch;
+-----+-----+-----+
| cust_number | Tv_id | stream_count |
+-----+-----+-----+
| 0123456780 | 1 | 233 |
| 0123456789 | 2 | 345 |
| 1112223333 | 3 | 65 |
| 1234567890 | 4 | 76 |
| 1234567891 | 5 | 60 |
| 2345678901 | 6 | 500 |
| 2345678902 | 7 | 45 |
| 3456789012 | 8 | 77 |
| 3456789013 | 9 | 90 |
| 4567890124 | 10 | 88 |
| 5678901234 | 11 | 55 |
| 5678901235 | 12 | 45 |
| 6789012345 | 13 | 565 |
| 6789012346 | 14 | 434 |
| 7890123456 | 15 | 343 |
| 7890123457 | 16 | 222 |
| 8901234567 | 17 | 170 |
| 8901234568 | 18 | 423 |
| 9012345678 | 19 | 600 |
| 9012345679 | 20 | 800 |
+-----+-----+-----+
20 rows in set (0.00 sec)
```

```
[mysql> select * from g_plays;
+-----+-----+-----+
| cust_number | G_id | p_count |
+-----+-----+-----+
| 0123456780 | 1234567890 | 45 |
| 0123456789 | 2345678901 | 34 |
| 1112223333 | 3456789012 | 56 |
| 1234567890 | 4567890123 | 70 |
| 1234567891 | 6789012345 | 100 |
| 2345678901 | 5678901234 | 555 |
| 2345678902 | 8901234567 | 70 |
| 3456789012 | 9012345678 | 67 |
| 3456789013 | 0123456780 | 13 |
| 4567890123 | 0123456789 | 80 |
| 4567890124 | 1234567891 | 57 |
| 5678901234 | 2345678902 | 20 |
| 5678901235 | 3456789013 | 44 |
| 6789012345 | 4567890124 | 24 |
| 6789012346 | 5678901235 | 33 |
| 7890123456 | 6789012346 | 66 |
| 7890123457 | 7890123457 | 60 |
| 8901234567 | 8901234568 | 56 |
| 8901234568 | 9012345679 | 78 |
| 9012345679 | 5678901234 | 500 |
+-----+-----+-----+
20 rows in set (0.00 sec)
```

```
[mysql> select * from m_rate;
+-----+-----+-----+
| cust_number | M_id | rating |
+-----+-----+-----+
| 0123456780 | M001 | 4 |
| 0123456789 | M002 | 4 |
| 1112223333 | M003 | 2 |
| 1234567890 | M004 | 5 |
| 1234567891 | M005 | 4 |
| 2345678901 | M006 | 3 |
| 2345678902 | M007 | 3 |
| 3456789012 | M008 | 5 |
| 3456789013 | M009 | 2 |
| 4567890123 | M010 | 4 |
| 4567890124 | M011 | 2 |
| 5678901234 | M012 | 3 |
| 5678901235 | M013 | 5 |
| 6789012345 | M014 | 5 |
| 6789012346 | M015 | 5 |
| 7890123456 | M016 | 4 |
| 7890123457 | M017 | 4 |
| 8901234567 | M018 | 3 |
| 8901234568 | M019 | 5 |
| 9012345679 | M020 | 5 |
+-----+-----+-----+
```

```
[mysql] select * from tv_rate;
+-----+-----+-----+
| cust_number | Tv_id | rating |
+-----+-----+-----+
| 0123456780 | 1 | 6 |
| 0123456789 | 2 | 5 |
| 1112223333 | 3 | 4 |
| 1234567890 | 4 | 3 |
| 1234567891 | 5 | 5 |
| 2345678901 | 6 | 3 |
| 2345678902 | 7 | 2 |
| 3456789012 | 8 | 3 |
| 3456789013 | 9 | 3 |
| 4567890123 | 10 | 5 |
| 4567890124 | 11 | 3 |
| 5678901234 | 12 | 5 |
| 5678901235 | 13 | 4 |
| 6789012345 | 14 | 3 |
| 6789012346 | 15 | 2 |
| 7890123456 | 16 | 2 |
| 7890123457 | 17 | 5 |
| 8901234567 | 18 | 4 |
| 8901234568 | 19 | 2 |
| 9012345679 | 20 | 3 |
+-----+-----+-----+
20 rows in set (0.00 sec)
```

```
[mysql] select * from customer_service;
+-----+-----+
| ESsn | cust_number |
+-----+-----+
| 111-11-1111 | 0123456780 |
| 333-33-3333 | 0123456789 |
| 444-44-4444 | 1112223333 |
| 555-55-5555 | 1234567890 |
| 666-66-6666 | 1234567891 |
| 777-77-7777 | 2345678901 |
| 888-88-8888 | 2345678902 |
| 111-11-1112 | 3456789012 |
| 222-22-2223 | 3456789013 |
| 333-33-3334 | 4567890123 |
| 222-22-2224 | 4567890124 |
| 444-44-4445 | 5678901234 |
| 555-55-5556 | 5678901235 |
| 666-66-6667 | 6789012345 |
| 777-77-7778 | 6789012346 |
| 888-88-8889 | 7890123456 |
| 111-11-1113 | 7890123457 |
| 222-22-2225 | 8901234567 |
| 333-33-3335 | 8901234568 |
| 444-44-4446 | 9012345679 |
+-----+-----+
20 rows in set (0.00 sec)
```

### Front end (Using python)

Users can either log in or create a new user

The front end is a menu-based system where users can log in or if they do not have an account create one. Once an account has been created users can log in and access the home menu in which they will be asked to select a section they would like to view. This includes movies or tv shows and games. If the user selects a movie or tv show they would enter whichever respected section in which the user will be able to search for a Movie/tv show by name, filter by genre or they can select to show all movie or tv shows. Based on the previous selection a list of movies or tv shows will be displayed, from which the user can select, and information about the selected movie will be displayed, then they will be redirected to the home menu again where they can start all over again or log out. If the user selects the game option in the home menu, then a list of all games that Netflix currently has will be displayed.

The create new user function will ask the user to enter various personal information. But the function will also generate a random unique account number that does not exist in the database and assign it to the new customer. The system will also generate a random IP address for the user which will determine their country. For example, if the system generates the IP address “321” the user’s country will be “USA” all of which will be stored in the database.

There is an Admin feature. Once you are logged in as admin you can add and remove movies to the database. The function has the admin enter the movie or tv show details and sends an insert query to MySQL for it to be added to the respective table. To prevent errors

when adding new movies or tv shows, the system will generate a random unique ID that does not belong to any existing movie or tv show and assign it to the new one. The system will display all departments that exist, which the admin can select to avoid errors when selecting a department to place the movie or tv show. The system will also display all directors that exist, which the admin can also select as the director of the film to prevent errors when inserting into the database. Lastly, the remove function grants the admin the ability to easily remove any movie or tv show. The system will display all movies or tv shows along with their respective director, and the admin can just select the targeted movie or tv show to be removed permanently.

#### **ScreenShot of Program Running**

```
1. Login
2. New User
input: 2
Enter you're first name: Marcus
Enter you're last name: Lame
Select a plan
1. Basic
2. Standard HD
3. HD4K
input: 2
Enter your address: 1 lock ave
Enter your email: marcuslame@gmail.com
Enter you phone number: 123-324-8902
Enter a 10 character password: safepass
Welcome to Netflix

1. Login
2. New User
input: 1
Enter email: marcuslame@gmail.com
Enter password: safepass

1. Movies
2. TV Shows
3. Show games
4. Logout
input: 4
Logged out, New Shows will be waiting for you're return

1. Login
2. New User
input: ■
```

## 2. Remove Movies

### 3. Go back

Input: 3

#### 1. Movies

#### 2. TV shows

#### 3. Logout

input: 2

#### 1. Add TV Show

#### 2. Remove TV Show

#### 3. Go back

Input: 3

#### 1. Movies

#### 2. TV shows

#### 3. Logout

input: 3

```
3. Go back
Input: 2
1 : How to train your dragon Kathryn Bigelow 0
2 : Nomadland Chloé Zhao 1
3 : The Hateful Eight Quentin Tarantino 0
4 : Talk to Her Pedro Almodóvar 1
5 : Dunkirk Christopher Nolan 1
6 : Do the Right Thing Spike Lee 0
7 : Moonlight Barry Jenkins 1
8 : Lost in Translation Sofia Coppola 1
9 : The Grand Budapest Hotel Wes Anderson 1
10 : The Lobster Yorgos Lanthimos 0
11 : Blade Runner 2049 Denis Villeneuve 1
12 : The Hurt Locker Kathryn Bigelow 1
13 : The Piano Jane Campion 1
14 : Orlando Sally Potter 1
15 : The Headless Woman Lucrecia Martel 0
16 : Boyz n the Hood John Singleton 1
17 : No Time to Die Cary Joji Fukunaga 1
18 : Pans Labyrinth Guillermo del Toro 1
19 : The Big Lebowski Joel Coen 0
20 : Fargo Ethan Coen 1
21 : In the Mood for Love Wong Kar-wai 1
Select movie to remove: 1
delete complete
1. Add Movies
2. Remove Movies
3. Go back
Input: 3
```

```
2 fantasy
3 Romance
4 Action
5. Adventure
6. Drama
7. Comedy
8. Science Fiction
9. War
10. Western
input: 2
Is Movie original TRUE/FALSE: 0
Enter Movie size MB/GB: 1.23
1 : Software Engineering
2 : Data Scientist
3 : Senior Software Engineer
4 : Descriptive Analytics
5 : Project Management
6 : Marketing
7 : Management
8 : Junior Management
9 : Direction
10 : Junior Engineering
11 : Marketing Analysis
Select a Department: 7
2 : Barry Jenkins
3 : Cary Joji Fukunaga
4 : Chloé Zhao
5 : Christopher Nolan
6 : Denis Villeneuve
7 : Ethan Coen
8 : Guillermo del Toro
9 : Jane Campion
10 : Joel Coen
11 : John Singleton
12 : Kathryn Bigelow
13 : Lucrecia Martel
14 : Pedro Almodóvar
15 : Quentin Tarantino
16 : Sally Potter
17 : Sofia Coppola
```

```
TV Show information:

Netflix Original
Title: On the Rocks
Genre: Comedy-drama
Director: Sofia Coppola
Episode: 45

1. Movies
2. TV Shows
3. Show games
4. Logout
input: 4
Logged out, New Shows will be waiting for you're return

1. Login
2. New User
input: 1
Enter email: admin
Enter password: pass

1. Movies
2. TV shows
3. Logout
input: 1
1. Add Movies
2. Remove Movies
3. Go back
Input: 1
Enter Movie name: How to train your dragon
Enter Movie length in minutes: 156
Enter Movie genre
1 crime
2 fantasy
3 Romance
4 Action
5. Adventure
```

```
name: OXENFREE
name: Stranger Things 3: The Game
name: Skies of Chaos
```

- 1. Movies
- 2. TV Shows
- 3. Show games
- 4. Logout

```
input: 2
```

```
TV Shows section:
```

- 1. Search
- 2. show all
- 3. Filter

```
input: 3
```

```
Enter Movie genre
```

```
1 crime
```

```
2 fantasy
```

```
3 Romance
```

```
4 Action
```

```
5. Adventure
```

```
6. Drama
```

```
7. Comedy
```

```
8. Science Fiction
```

```
9. War
```

```
10. Western
```

```
input: 7
```

```
1 : The Chair
```

```
2 : The Party
```

```
3 : The Chair
```

```
4 : Shes Gotta Have It
```

```
5 : Shes Gotta Have It
```

```
6 : On the Rocks
```

```
7 : American Express
```

```
8 : The Favourite
```

```
input: 6
```

```
18 : The Big Lebowski
19 : Fargo
20 : In the Mood for Love
input: 20
```

Movie information:

```
Netflix Original
Title: In the Mood for Love
Genre: Romance
Director: Wong Kar-wai
```

- 1. Movies
- 2. TV Shows
- 3. Show games
- 4. Logout

input: 3

```
name: Layas Horizon
name: Relic Hunters: Rebels
name: Dust & Neon
name: Before Your Eyes
name: Hextech Mayhem: A League of Legends Story
name: Lucky Luna
name: Poinpy
name: Twelve Minutes
name: Tomb Raider Reloaded
name: Bowling Ballers
name: Hello Kitty and Friends: Happiness Parade
name: Arcanum Rise of Akhan
name: Highwater
name: Card Blast
name: Rival Pirates
name: Dragon Up
name: Nailed it! Baking Bash
name: OXENFREE
name: Stranger Things 3: The Game
name: Skies of Chaos
```

```
Movie information:
```

```
Netflix Original  
Title: In the Mood for Love  
Genre: Romance  
Director: Wong Kar-wai
```

- 1. Movies
  - 2. TV Shows
  - 3. Show games
  - 4. Logout
- input: 1

```
Movies section:
```

- 1. Search
  - 2. show all
  - 3. Filter
- input: 2
- 1 : Nomadland
  - 2 : The Hateful Eight
  - 3 : Talk to Her
  - 4 : Dunkirk
  - 5 : Do the Right Thing
  - 6 : Moonlight
  - 7 : Lost in Translation
  - 8 : The Grand Budapest Hotel
  - 9 : The Lobster
  - 10 : Blade Runner 2049
  - 11 : The Hurt Locker
  - 12 : The Piano
  - 13 : Orlando
  - 14 : The Headless Woman
  - 15 : Boyz n the Hood
  - 16 : No Time to Die
  - 17 : Pans Labyrinth
  - 18 : The Big Lebowski
  - 19 : Fargo

```
1. Login
2. New User
input: 1
Enter email: johndoe@gmail.com
Enter password: pass123

1. Movies
2. TV Shows
3. Show games
4. Logout
input: 1
Movies section:

1. Search
2. show all
3. Filter
input: 1
Enter the movie you would like to find: Over
No movies found for Over

1. Movies
2. TV Shows
3. Show games
4. Logout
input: 1
Movies section:

1. Search
2. show all
3. Filter
input: 1
Enter the movie you would like to find: Love
1 : In the Mood for Love
input: 1
```