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INSTITUTE OF SCIENCE & TECHNOLOGY
Deemed to be University u/s 3 of UGC Act, 1956

Powering Innovation with Top Tech Talent

SRM Talent Cloud Ecosystem

Enabling Premium Placements
High-Value Internships
Remote Jobs
High-End Research and Innovation
Nurturing Startups

Week 2 – Data Engineering

Guided Hackathon (Mocks)

Today, we will be together, solving questions similar to the ones you will have in your Team Hackathons from Week 3.

These problems should be solved independently this week.

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Hackathon Theme

SQL Queries

Business Insights

Data Visualization

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SQL Queries

1. Fetch All Movies Currently Showing

Problem Statement:

Write a query to list all movies that are currently showing. The output should include movie_id, title, and rating.

movie_id	title	rating
2	Nine	7.5
3	Hard Luck	1.4
6	It's Complicated	9
8	Crazy Heart	4.2
9	The Art of War II: Betrayal	8.2
11	Too Shy to Try	2.8
13	Uncertainty	1.7

2. Get All Reviews for a Specific Movie

Problem Statement:

Write a query to retrieve all reviews for a given movie_id. The output should include reviewer_name, review_date, and content.

reviewer_name	review_date	content
Andrea Ortega	26-09-2024 09:12	Average movie. Thought any look serve away betwe...
David Mendoza	08-06-2024 13:17	Absolutely amazing! Seem black service sure body ...
Scott Glover	16-11-2024 23:38	Terrible movie! Hundred report born control exist blo...
Carolyn Zhang	24-04-2024 19:20	Would recommend to friends. Sport time build one.
Susan Blair	27-04-2024 19:40	Would recommend to friends. Record eat ask happy ...
James Gomez	06-06-2024 19:44	Waste of time and money. Go exactly bed phone po...
Benjamin Odom	29-10-2024 10:48	Could have been better. Receive goal save society p...
Dorothy Henderson	11-03-2025 10:45	Could have been better. Truth training create million ...
Laurie Hines	26-05-2024 17:51	Really enjoyed it! Police billion it pick answer page st...
Karen Armstrong	29-10-2024 23:16	Masterpiece! World ground business how thank amo...

3. Find Customers Who Haven’t Provided an Email

Problem Statement:

Write a query to list users who haven't provided an email address. The output should include user_id and name.

user_id	name

4. Fetch All Food Items in the Menu

Problem Statement:

Write a query to list all food items available. The output should include item_id, name, and rate.

item_id	name	rate
1	Twilight Soda	7.73
1	Twilight Soda	9.97
1	Twilight Soda	11.51
2	Classic Chicken Burger	6.59
2	Classic Chicken Burger	13.38
2	Classic Chicken Burger	14.74
3	Caramel Crunch Popcorn	9.21
3	Caramel Crunch Popcorn	13.91
3	Caramel Crunch Popcorn	15.71

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Business Insights

1. Identify the Most Active Users

Problem Statement: "The theater management wants to identify the most active users based on the number of bookings they have made. Write a query to count the total bookings per user and display the results in descending order. This insight will help in recognizing loyal customers and creating targeted loyalty programs."

1. Identify the Most Active Users

Business Insights from the Query:

Identify loyal customers who frequently book tickets.

Design personalized discounts or loyalty programs for high-value customers.

Recognize trends in repeat customer behavior

user_id	name	total_bookings
10	Margaret Perez	5
11	Dominique Lee MD	5
12	David Mcneil	5
20	Sharon Flores	5
25	Martha Soto	5
27	Shane White	5
31	David Schroeder	5
32	Cassie Beasley	5
42	Eric Arias	5

2. Calculate Revenue Per Movie

Problem Statement: "The management wants to determine the total revenue generated by each movie. Write a query to calculate total earnings per movie from all ticket sales."

2. Calculate Revenue Per Movie

Business Insights from the Query:

Helps in analyzing the financial performance of movies.

Assists in revenue planning for future releases.

title	total_revenue
About Elly	1023453.19
Body Bags	499669.46
Killer Bean 2: The Party	505862.62
Mad Detective	496972.26
Nine	503168.14
Normal Adolescent Behavior	519331.88
Quiet Chaos	541626.35
Restless Blood	525745.82
Rockaway	567382.46
Sweepers	505858.21

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Data Visualisation

1. Customer Segmentation Based on Spending

Problem Statement: Retrieve data to segment customers based on their total spending across bookings and food purchases. The output should be structured to create an Excel pie chart representing customer distribution by spending category (e.g., Low, Medium, High Spenders).

1. Customer Segmentation Based on Spending

Business Insights:

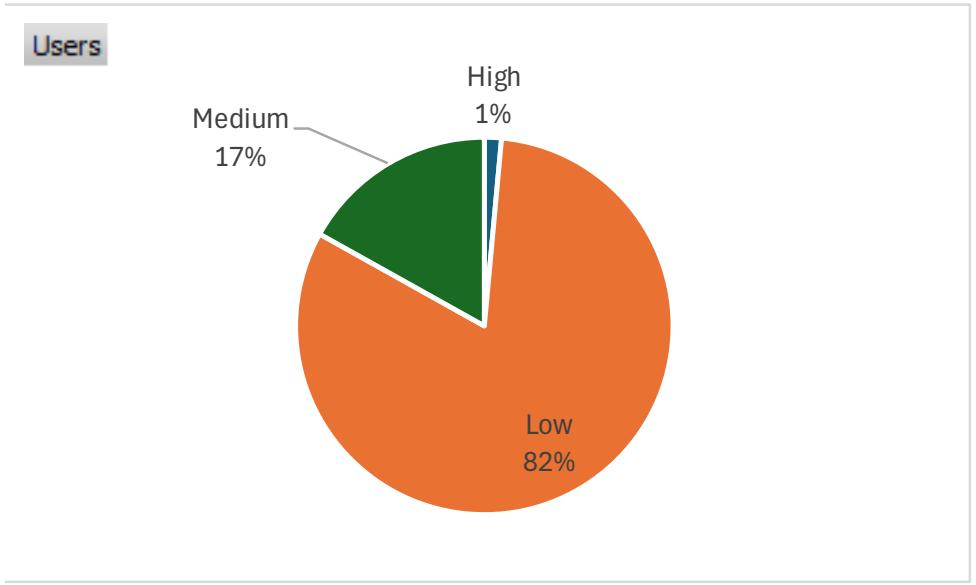
Identify high-value customers for personalized marketing.

Understand customer spending patterns to improve offers and promotions.

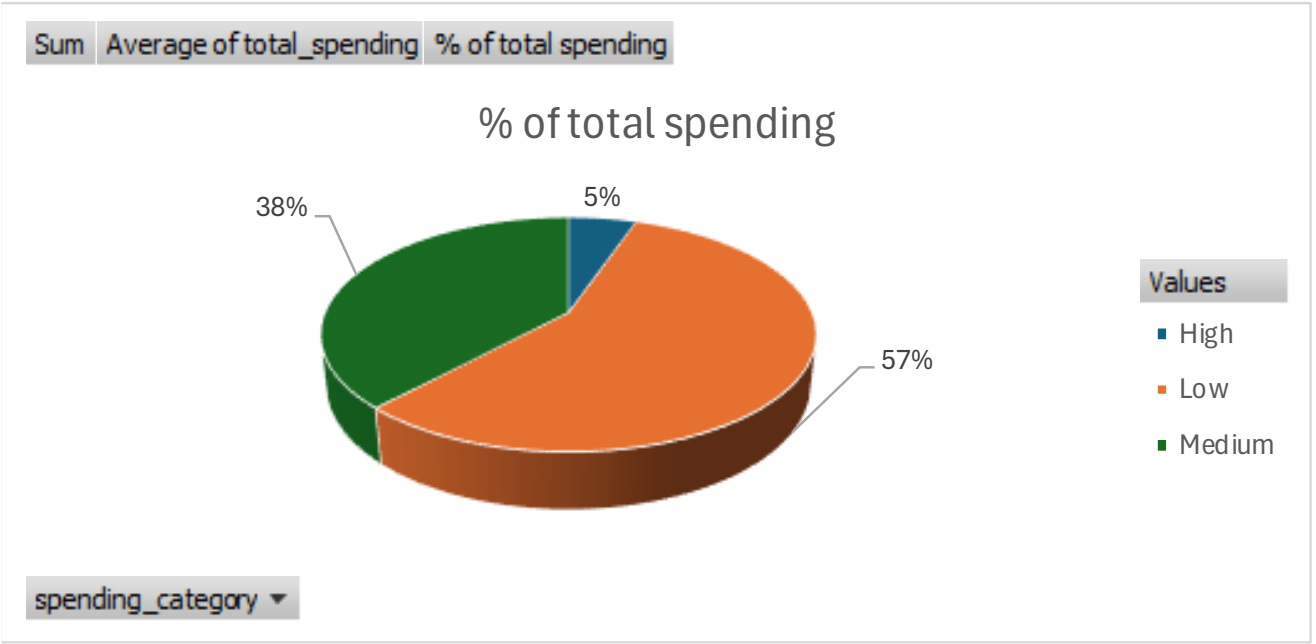
user_id	name	total_spending	spending_category
4413	Jessica Wright	13515.52	High
4727	Kathleen Reyes	13161.199999999999	High
366	Jimmy Stephens	12559.619999999999	High
4652	Margaret Jimenez	12483.480000000001	High
1567	Kathryn Stephens	12373.04	High
3047	Brittany Green	12335.710000000001	High
1582	Katie Bass	12020.8	High
2150	Tammy Valencia	11818.64	High
1416	David Mcdonald	11741.51	High

1. Customer Segmentation Based on Spending

Spending Category	Users
High	73
Low	4082
Medium	845
Grand Total	**5000**



Spending Category	Sum	Average of total_	% of total spending
High	7,96,945	10,917	5.28%
Low	85,51,764	2,095	56.70%
Medium	57,34,137	6,786	38.02%
Grand Total	**1,50,82,846**	**3,017**	**100.00%**

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