🏋️ Mini Project Report: Gym Fitness Data Analysis

📘 **Project Title:**

Comprehensive Analysis of Gym Members' Fitness and Workout Performance Using Power BI and Excel

🙍 **Prepared By:**

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Tool Used: Microsoft Excel, Microsoft Power BI

🎯 **Objective of the Project**

The main goal of this project is to analyze gym members' physical performance, workout consistency, and fitness progression through data visualization and statistical insights using Excel and Power BI.
The dataset provides detailed information on 973 gym members, including their exercise routines, demographics, and health indicators.

🧩 **Dataset Overview**

Attribute	Description
Age, Gender	Demographic details of gym members
Height, Weight, BMI	Physical measurements
Heart Rate (Max, Avg, Resting)	Fitness performance indicators
Calories Burned	Energy expenditure during workouts
Session Duration (hrs)	Time spent per session
Workout Type & Frequency	Training style and consistency
Water Intake (Liters)	Hydration levels
Fat %	Body composition
Experience Level (1–3)	Beginner to Expert levels

📊 Dashboard Summary Metrics

Metric	Value	Insight
Total Members	973	Total number of participants analyzed
Male Members	511	52.5% of total members
Female Members	462	47.5% of total members
Average BMI	26.89	Indicates slightly above normal range
Average Resting BPM	62.32	Suggests good cardiovascular health
Average Session Duration	1.25 hours	Typical time spent per session
Total Workouts Recorded	3,232	Reflects total exercise sessions logged
Average Heart Rate Difference	117.66	Difference between Max & Resting BPM
Average Water Intake	2.63 liters	Adequate hydration maintained
Average Fat Percentage	24.98%	Within a healthy fitness range
Average Calories Burned	905.42 kcal/session	High-intensity workouts on average

💪 Key Insights

- **Gender Distribution:** Male members slightly outnumber females.

- **Workout Efficiency:** Average calorie burn per hour indicates strong workout performance.

- **Hydration & Fat %:** Consistent water intake supports healthy fat management.

- **Heart Rate Analysis:** Members maintain a healthy resting heart rate and show strong cardiovascular response during workouts.

- **Experience Level:** Experts show higher workout effectiveness in shorter sessions.

- **BMI Trends:** Average BMI slightly above 25 indicates room for improvement in fat control.

📁 **Attachments**

📄 **1. Original Data (Excel Format)**

https://docs.google.com/spreadsheets/d/1-mq80wPIN2jqAWULdNPBThC04vpPX7VC/edit?usp=drive_link&ouid=105234811876953616534&rtpof=true&sd=true

🌐 **2. Dataset Source Link**

🔗 **Dataset Link:** https://www.kaggle.com/datasets/valakhorasani/gym-members-exercise-dataset

📘 **3. Final Dashboard (PDF Format)**

https://drive.google.com/file/d/1vjb-h75FKNZlnHHixcjAl9KUppoZpPX8/view?usp=drive_link

🧠 **Conclusion**

The analysis provided valuable insights into members' workout intensity, calorie management, and cardiovascular performance.
Through this project, Power BI proved to be a powerful tool for visualizing health data, identifying trends, and supporting data-driven fitness planning.