Business Report:

Our organization, a fitness center, utilizes a dashboard based on tables that contain extensive data on trainees, including details about their physical activities, personal information, and accompanying metrics for efficient analysis and management. This setup enables efficient monitoring of member activities and business metrics, offering tailored dashboards for both management and trainees to optimize performance.

From this data, we analyze two Dashboards:

1 .For management

2 .For trainees

Dashboard – Management:

The dashboard is designed to meet the management's needs by creating a comprehensive picture of the fitness center's revenues, which are influenced by several factors: types of exercises, profits from each exercise, client expenses, and a detailed analysis of the total profit generated by the center. The report particularly highlights which types of exercises contribute most to the overall profit.

Understanding the financial situation of the fitness center is critical for managers as it enables informed decision-making and strategic planning. Familiarity with revenue sources such as supplements and membership fees allows managers to allocate resources efficiently, identify growth opportunities, and optimize marketing efforts. This financial insight is

essential for maintaining profitability, sustaining operations, and ensuring the overall financial health of the fitness center.

This critical analysis addresses the fundamental question of financial management: What are the main training categories that contribute to the fitness center's revenue? This question is important as it relates to the financial drivers behind the fitness center's revenues. Understanding which categories of training significantly contribute to income is crucial for efficient resource allocation, optimization of marketing strategies, and informed decision-making by managers. It provides insights into the financial functioning of the center and allows thinking about proactive steps to maintain profitability. Indeed, answering this question enables managers to make data-driven strategic decisions to ensure the long-term success of the fitness center.

Based on our data analysis, it appears that the "cardiovascular endurance" and "balance" training categories yield the highest revenues. Therefore, it is recommended to promote these training programs to more clients as there is a high likelihood that they will not only enjoy but also significantly contribute to increasing profits. This strategic approach matches both customer preferences and financial objectives aimed at improving overall profitability. By highlighting and promoting these profitable training categories, the fitness center can attract more participants to capitalize on their interest and consequently maximize revenues. This recommendation is based on achieving a dual goal of satisfying customer satisfaction from the center and additionally promoting the financial growth of the center's revenues.

Another critical question explored in the report examines how many sessions trainees started and did not finish in various training categories? While many users start different exercises, not all continue to completion. Our goal is to conduct a comparative analysis to understand the motivation levels of trainees to invest efforts in preventing early discontinuation of exercises. This examination helps identify potential factors contributing to incomplete trainings, such as lack of knowledge, motivation, or perhaps dissatisfaction with a coach. By understanding and addressing these issues, we not only improve user satisfaction but also significantly impact the financial success of the fitness center.

According to data analysis, many users initiate but do not complete strength exercises, and in the core category, there is a user who started training in this category three times but only completed it once. Understanding and addressing these issues are crucial to the economic success of the fitness center in several ways: by tailoring training programs to better match the preferences and motivations of the trainees, we can increase trainee retention at the center and attract new customers. Additionally, a high completion rate of trainings indicates that the training indeed satisfies the trainee and that they are motivated to continue training at the center, therefore it is necessary to analyze thoroughly which trainees complete trainings and which do not, and what type of training categories are involved.

In order to improve these issues to enhance the financial situation of the center, we must consider providing additional support and guidance to users engaged in strength and core exercises, ask for feedback from trainees about their concerns/complaints/how effective the trainings in the category are. By implementing these strategies, fitness center managers can

not only improve the satisfaction and motivation of the trainees but also cultivate a stronger financial base for the fitness center by increasing the involvement of the trainees and paying attention to the categories of strength and core exercises at the fitness center.

Another question that the report answers is how has the overall profitability of the fitness center developed over the years? Tracking how much the fitness center earns over the years is important to understand its financial path. It helps us see if the fitness center is succeeding economically or facing challenges. By knowing the trends in total profit, we can make smart decisions to manage the fitness center's economy better, use resources wisely, and plan the future operation of the center. This information is vital to maintaining the financial stability of the fitness center to ensure it can grow and handle any ups and downs in business.

According to the data, the fitness center is currently at a loss. The fitness center opened in 2019 with a loss of about 8,000 NIS, and the decline in profits continued until 2021. In 2021, there was a slight increase in profits and then a decline again. Only from 2023 onwards there is a gradual increase with a current loss of around minus 4. By analyzing these trends, we can make informed decisions to change the financial situation. Strategies such as implementing steps to reduce costs, improving membership plans, and optimizing resource allocation can contribute to the economic success of the fitness center. Additionally, maintaining awareness of trends and making proactive adjustments will ensure that the business thrives and avoids staying in a negative financial situation.

In order to improve profitability, fitness center managers need to implement strategic steps based on the financial trends observed. Consider initiatives to reduce costs, perform resource allocation optimization, and think about innovation in the fitness center to attract and retain customers. Additionally, consider conducting marketing campaigns and purchasing innovative equipment for the fitness center to diversify, attract customers, improve the center's revenues, and retain them for the long term.

Dashboard – Trainees:

The main goal of the dashboard is to address the needs of trainees in the fitness center with comprehensive insights into their training routines. By visualizing data on their membership period at the fitness center, their calorie burn per equipment used in training, and the various difficulty levels they train at, it allows users to make informed decisions to improve their workouts. This platform enables tracking of progress, identification of areas for improvement, and ultimately maximizes the efficiency of the trainees' workouts, leading to better outcomes.
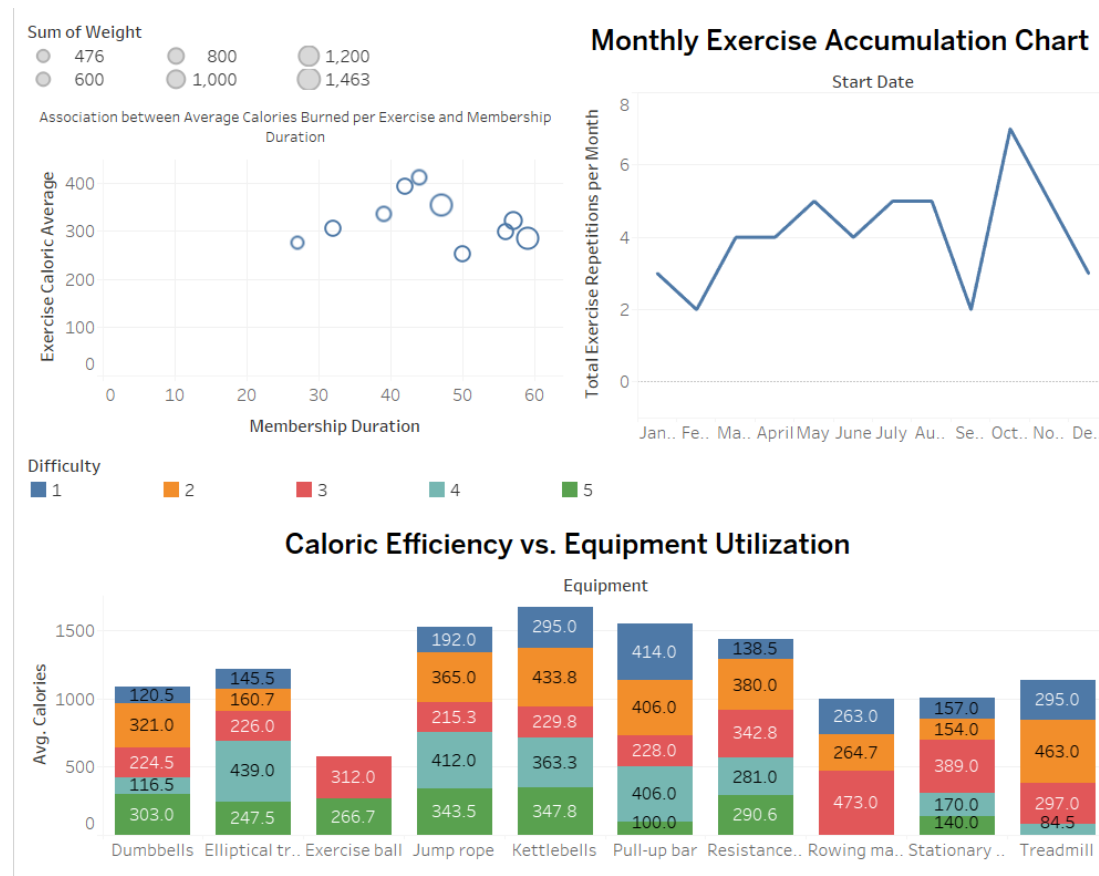
This dashboard is crucial for both trainees and the fitness center because it provides important insights regarding the participants' physical activity routines. This comprehensive understanding allows users to make informed decisions to enhance their training efficiency, track progress, and identify areas for improvement.

<u>One question the dashboard addresses is whether there is a relationship between the duration of the user's membership and the frequency of their gym attendance (which leads to increased calorie burn)?</u>

This question is critical for the fitness center as it delves into the relationship between membership duration, frequency of workouts, and consequently, calorie burning. Understanding whether the length of a fitness center membership affects the frequency of workouts (increasing or decreasing), and consequently whether it leads to higher or lower calorie burning, provides important insights about the trainee's training plans, their motivation, etc. Addressing this question can lead to improved satisfaction rates, retention rates, and overall success for the fitness center.

The graph shows that users with a membership of more than 60 days burn an average of 1,463 calories, while those with a membership between 25-45 days burn an average of 600 calories.

These insights are critical both for fitness trainees and the fitness center itself, as it offers important insights about the trainees' physical activity routines. Comprehensive understanding allows trainees to make informed decisions to improve the effectiveness of their workouts, to follow progress, and to identify areas for improvement. For trainees in the fitness center, this data highlights the importance of consistent attendance at the gym to achieve fitness goals and ultimately contribute to trainee satisfaction and the overall success of the center.

Another question we answer is how does the average calorie expenditure, measured in repetitions, vary over the months?

This information is vital as it provides insights into trends or patterns of trainees' workouts over different months. Understanding how calorie burning changes over time can help the management of the fitness center analyze what happened in certain months where trainees' workouts were less effective (according to the number of repetitions and average calorie burn accordingly) and make significant programs regarding the effectiveness of their workouts.

The results indicate a decrease in average calorie expenditure per repetition in the months of February and September, while an increase is observed in November. The fitness center can analyze what happened during these months, perhaps identifying specific events or factors that negatively influenced the participants' workouts. By understanding why the workouts were less effective on average during these months, the fitness center can make necessary changes to ensure that in these months trainees increase their number of repetitions, thus burning more calories accordingly.

Another question the dashboard answers is how does the choice of gym equipment affect caloric expenditure, considering the difficulty level of each exercise with the appropriate equipment?

This question is critical for the fitness center in the context of trainees as it provides insights into the effectiveness of various fitness devices in terms of calorie expenditure and difficulty level. Understanding how different types of workout equipment affect calorie burning and the difficulty level of training helps the fitness center tailor its equipment and training programs to better meet the needs and preferences of trainees. By identifying the most efficient and suitable equipment for different goals and fitness levels, the fitness center can improve trainee satisfaction, involvement, and overall training experience.

From analyzing the data, the results show that exercises with kettlebells burn the most calories at the highest difficulty level (level 5). Furthermore, workouts with tension rods burn the most calories at the lowest difficulty level. Additionally, workouts with the elliptical machine burn the most calories at training level 4.

Based on these results, the fitness center should consider tailoring its choice of equipment and training programs based on the findings. This could involve integrating exercises using equipment that yields higher calorie burn rates, especially at different difficulty levels. By

optimizing the use of equipment and training programs accordingly, the fitness center can improve the effectiveness of its workouts and lead to greater satisfaction among trainees.

Exercise Category

User	Balan..	Cardio	Core	HIIT	Pilates	Stren..	Stret..	Yoga
User1	1	1		1		2		1
User2	1	2	1	1	1	2	1	1
User3				2	2	1	1	
User4		1	1			1	2	
User5		1	2	2	2	2		2
User6	1	1		1	1	1	1	
User7			1	1	2	1	2	
User8		1	1	2	1	1	1	2
User9	2			1	2		1	1
User10	2	2		1			1	1

Total Exercises Completed by Users

(Stacked bar chart with Total Exercise on the y-axis ranging from 0 to 350+)
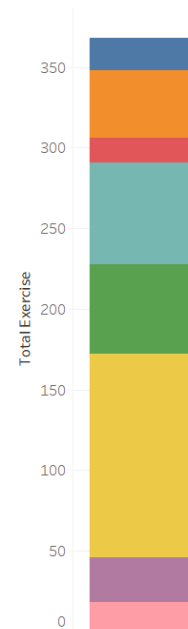
In the OLAP chart, we constructed data in a hierarchical format, with rows representing the user hierarchy and whether they completed the exercise or not, and columns describing the exercise category, the exercise itself, and its difficulty level from one to five. This chart is significant for the fitness center as it provides a comprehensive overview of trainees' involvement and performance regarding different training categories and their difficulty levels. It allows the fitness center to identify patterns, trends, and areas for improvement in trainees' interaction with exercises.

From this chart, we can gain insights into user behavior and realize the effectiveness. For example, we can see which exercise categories are more challenging for users and whether the difficulty levels match the workouts. It is important for the fitness center to know this information about the trainees because it helps them better tailor their workouts. By understanding which workouts are more challenging and how users perform, the fitness center can adjust the difficulty levels and content of their workouts to better suit the needs of their trainees. This leads to an improvement in trainee satisfaction and engagement, and ultimately benefits the reputation and retention rates of the fitness center.

Additionally, we created a graph that displays the number of workouts completed by users. This graph is critical because by tracking the workouts, the fitness center can assess the effectiveness of their workouts and identify potential issues that may need to be addressed, such as low participation rates in workouts or dissatisfaction with certain workouts. This insight allows the fitness center to make informed decisions about how to improve their workouts and make the trainees' experience better accordingly.