PART A

**Management Issue in my previous experience as a banking officer to High-net-worth Individuals (HNIs)**

In my previous role as an HNI banking officer, I encountered a management issue related to lounge services for our premium banking clients. The issue was ensuring that the lounge services provided met the expectations and preferences of our high-net-worth clients. It was a challenge to strike the right balance between providing a luxurious and personalized experience while managing operational costs effectively.

Business Analytics Method Proposed:

To address this issue, I recommend employing a Prescriptive Analytics approach. Prescriptive analytics goes beyond descriptive and predictive analytics by not only providing insights into what has happened or what might happen but also by offering actionable recommendations on what actions to take to achieve specific objectives.

Step-by-Step Solution and Justification:

1. Data Collection and Analysis:

- Collect data on lounge usage, including foot traffic, peak hours, and services utilized by clients.

- Analyze client feedback and preferences through surveys and feedback forms.

Justification: This step allows us to understand the current state of lounge services and client preferences, forming the foundation for prescriptive analytics.

2. Client Segmentation:

- Segment high-net-worth clients based on their preferences and usage patterns.

Justification: Segmenting clients helps tailor lounge services to meet the specific needs and expectations of different client groups.

3. Prescriptive Modeling:

- Develop a prescriptive analytics model that suggests service improvements and operational changes based on client segmentation, usage patterns, and feedback.

- The model should consider cost implications and revenue potential.

Justification: Prescriptive modeling considers both client preferences and cost-effectiveness, providing recommendations that optimize lounge services.

4. Testing and Implementation:

- Implement the recommended changes on a pilot basis in selected lounges.

- Monitor client reactions and operational performance closely during this phase.

Justification: Testing the recommendations in a controlled environment allows for adjustments before full-scale implementation.

5. Continuous Monitoring and Fine-Tuning:

- Continuously monitor client satisfaction, usage patterns, and operational costs in the updated lounges.

- Fine-tune services based on real-time data and client feedback.

Justification: Lounge services must evolve with changing client preferences and operational realities.

6. Scaling and Expansion:

- If the pilot phase is successful, scale the recommended changes to all lounges.

Justification: Implementing successful changes across all lounges ensures a consistent premium experience for all high-net-worth clients.

7. Performance Metrics and Reporting:

- Develop key performance indicators (KPIs) to measure the success of the updated lounge services.

- Regularly report the performance against these KPIs to senior management and stakeholders.

Justification: Monitoring and reporting provide visibility into the impact of changes and help in making data-driven decisions.

In summary, the use of Prescriptive Analytics is justified in addressing the management issue of optimizing lounge services for high-net-worth clients. This approach provides actionable recommendations for service improvements and operational changes based on client segmentation, usage patterns, and feedback, while considering cost-effectiveness. It also allows for continuous monitoring, fine-tuning, and scaling of improvements to ensure a consistently high-quality experience for all clients.

PART B

A dummy sample data was created from my previous work experience. The file is contained in <https://raw.githubusercontent.com/emasade/hni/main/HNI%20DATA%20SET%20BA%20assignment%201.csv>

1. **Gather and provide data of at least 100 rows and three columns or variables**

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1. **Analyzing the data**: By understanding the required data required to determine whether the operating cost of running an HNI lounge is cost-productive, sample data was collected during the peak hours of the banking lounge, and I examined the turnaround time spent by customers who accessed the lounge as against the customers who accessed the general banking hall. Using GitHub, a raw file was generated and then imported into Python.
2. **Load (import) and clean your data.**

The provided data is examined and refined to detect the presence of any missing or erroneous information within the file. The result of the 'LOUNGE.isnull()' operation, as depicted in the screenshot below, confirms that the data is devoid of any errors.

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**c. Conduct full exploratory data analysis and summarize the findings for data provided in *part b* in the form of a managerial statement.**

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1. **According to your findings in part c, note the major trends, potential anomalies, opportunities for acquiring new data, directions for future data analysis. A screenshot of a computer

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