**CASE STUDY: Enhancing Guest Experience through AHP-based Host Comparison: A Case Study on Airbnb**

**Introduction:**

In the highly competitive online travel booking industry, ensuring guest satisfaction and loyalty is of utmost importance for Airbnb's success. The challenge lies in providing guests with a user-friendly tool to make informed decisions and select the most suitable accommodations from a vast array of listings. To address this business problem, this case study explores how Airbnb's Host Comparison feature, utilizing the Analytic Hierarchy Process (AHP), enhances guest experience and fosters customer loyalty.

**Business Problem:**

Airbnb faces the challenge of helping guests navigate through numerous host listings and select the most suitable accommodation for their travel needs. The sheer volume of options can lead to decision paralysis and potential booking drop-offs. Additionally, the lack of transparent information about hosts and their properties may hinder trust-building efforts, impacting guest satisfaction and repeat bookings.

**Solution:** Airbnb's AHP-based Host Comparison Feature

Airbnb's solution to address the business problem involves implementing an AHP-based Host Comparison feature. The feature incorporates the following elements:

**Criteria and Sub-criteria Definition:**

Airbnb defines five primary criteria for host comparison: Location, Accommodation, Amenities, Price, and Reviews and Ratings. Each criterion is further broken down into specific sub-criteria, such as Safety and Neighborhood and Transportation under the Location criterion.

Pairwise Comparison:

For each criterion and sub-criterion, Airbnb conducts pairwise comparisons to determine their relative importance. Participants, including guests and domain experts, assign values indicating the relative significance of one criterion over another on a scale from 1 to 9.

Weighted Relative Importance:

Airbnb calculates the weighted relative importance for each criterion and sub-criterion by normalizing the pairwise comparison matrices. The average weight for each criterion is then computed, considering the values in the corresponding rows.

Synthesis and Composite Score:

Finally, Airbnb synthesizes the results and generates a composite score for each host listing by considering the weighted scores for each criterion and sub-criterion. This composite score aids guests in making well-informed decisions aligned with their preferences.

**Impact and Results:**

By implementing the AHP-based Host Comparison feature, Airbnb expects to achieve the following outcomes:

Enhanced Guest Satisfaction: The feature simplifies the decision-making process, leading to higher guest satisfaction and reduced booking drop-offs.

Improved Trust and Credibility: Transparent comparisons based on objective criteria build trust and credibility among guests, fostering positive perceptions of the platform.

Increased Guest Loyalty: Guests appreciate the ease of comparing hosts, leading to higher customer loyalty and repeat bookings.

Data-Driven Insights: The analysis of guest preferences and host performance provides valuable data insights, enabling Airbnb to tailor its offerings better to meet customer needs.

**Conclusion:**

Airbnb's AHP-based Host Comparison feature serves as a powerful solution to enhance guest experience and foster customer loyalty. By leveraging data analysis and the AHP method, the platform empowers guests to make well-informed decisions when selecting accommodations. The case study demonstrates Airbnb's commitment to employing advanced analytics tools to address real-world business challenges, ensuring its competitive edge in the online travel industry.