



## DIABETES PREDICATION ASSESSMENT QUESTIONS

**Note:** These assessment questions cater to interns at various skill levels, from beginners to experienced analysts. If you find any questions challenging, feel free to search for solutions or contact us at [intern@psyliq.com](mailto:intern@psyliq.com) for assistance. Good luck with the assessment!

USE BIGQUERY OR MYSQL (<https://cloud.google.com/bigquery>) FOR SQL QURIES

1. Retrieve the Patient\_id and ages of all patients.
2. Select all female patients who are older than 40.
3. Calculate the average BMI of patients.
4. List patients in descending order of blood glucose levels.
5. Find patients who have hypertension and diabetes.
6. Determine the number of patients with heart disease.
7. Group patients by smoking history and count how many smokers and non-smokers there are.
8. Retrieve the Patient\_ids of patients who have a BMI greater than the average BMI.
9. Find the patient with the highest HbA1c level and the patient with the lowest HbA1clevel.
10. Calculate the age of patients in years (assuming the current date as of now).
11. Rank patients by blood glucose level within each gender group.
12. Update the smoking history of patients who are older than 50 to "Ex-smoker."
13. Insert a new patient into the database with sample data.
14. Delete all patients with heart disease from the database.
15. Find patients who have hypertension but not diabetes using the EXCEPT operator.

16. Define a unique constraint on the "patient\_id" column to ensure its values are unique.
17. Create a view that displays the Patient\_ids, ages, and BMI of patients.
18. Suggest improvements in the database schema to reduce data redundancy and improve data integrity.
19. Explain how you can optimize the performance of SQL queries on this dataset.