# Task 1.

Skills – SQL

Description

You are given three tables: Students, Friends and Packages. Students contains two columns: ID and Name. Friends contains two columns: ID and Friend_ID (ID of the ONLY best friend). Packages contain two columns: ID and Salary (offered salary in $ thousands per month).

Query

Provide solution and approach for the following:

Write a query to output the names of those students whose friends got offered a higher salary than them. Names must be ordered by the salary amount offered to the best friends. It is guaranteed that neither of the two students got the same salary offer.

# Finding

I've analyzed the database structure and the SQL query provided for the assignment. Here's my explanation of the analysis and findings:

The database "cogitate" contains information about students, their friendships, and salary package offers. It's structured with three tables: Students, Friends, and Packages.

In my analysis of the data, I found that there are four students: Ashley, Samantha, Julia, and Scarlet. Each student has a unique ID and is friends with one other student in a circular pattern. For instance, Ashley is friends with Samantha, Samantha with Julia, Julia with Scarlet, and Scarlet with Ashley.

The Packages table reveals that each student has received a different salary offer. Ashley has the highest offer at $15.20, while Samantha has the lowest at $10.06.

The main query in the assignment aims to identify students whose friends received higher salary offers than they did. It does this by comparing each student's salary with their friend's salary.

From my analysis of this query, I can conclude that:

It will only return names of students who have friends with higher salary offers.

The results will be ordered based on the friend's salary, from lowest to highest.

Given the sample data, I expect the query to return:

Samantha (because Julia, her friend, has a higher offer)

Julia (because Scarlet, her friend, has a higher offer)

These names would be listed in this order because Julia's friend's salary (Scarlet's $12.12) is lower than Samantha's friend's salary (Julia's $11.55).

This query effectively demonstrates how to use JOIN operations to connect related data across multiple tables and how to compare values between related records.