HW10

(1) Database (SQLite). Use the Todo database from in-class example. Drop the Completed column. Add columns for StartDate and FinishDate (you will need to determine how to best handle what the data should be if the todo has not been started).

1) Find a SQL statement to calculate the average number of days to complete a task for all team members. For example, Team Member A completed tasks in 3 days and 4 days, and Team Member B completed a task in 3 days. The average of this would be ((3 + 4)/ 2 + 3) / 2 = 3.25 days.

:SQL queries used for below task:

SELECT \* FROM Todo;

ALTER TABLE Todo

DROP COLUMN Completed;

ALTER TABLE Todo

ADD StartDate DATE;

ALTER TABLE Todo

ADD FinishDate DATE;

UPDATE Todo

SET StartDate = '2023-11-01 15:30:00'

WHERE Task="Document DB design";

UPDATE Todo

SET FinishDate = '2023-11-13 15:30:00'

WHERE Task="Document DB design";

Query to get the average of individual teammemberid and group them and calculate the total average query:

WITH AvgCompletionByTeam AS (

SELECT

TeamMemberID,

AVG(julianday(FinishDate) - julianday(StartDate)) AS avg\_completion\_time

FROM Todo

WHERE StartDate IS NOT NULL AND FinishDate IS NOT NULL

GROUP BY TeamMemberID

),

TotalAverage AS (

SELECT AVG(avg\_completion\_time) AS final\_total\_average\_completion\_time

FROM AvgCompletionByTeam

)

SELECT final\_total\_average\_completion\_time

FROM TotalAverage;

2) Find a SQL statement to show the list of team members whose average task completion was less than the average task completion of all team members (use above result). Please submit the updated database, and the SQL statements.

WITH AvgCompletionByTeam AS (

SELECT

TeamMemberID,

AVG(julianday(FinishDate) - julianday(StartDate)) AS avg\_completion\_time

FROM Todo

WHERE StartDate IS NOT NULL AND FinishDate IS NOT NULL

GROUP BY TeamMemberID

),

TotalAverage AS (

SELECT AVG(avg\_completion\_time) AS final\_total\_average\_completion\_time

FROM AvgCompletionByTeam

)

SELECT

A.TeamMemberID,

A.avg\_completion\_time,

TA.final\_total\_average\_completion\_time

FROM AvgCompletionByTeam A

CROSS JOIN TotalAverage TA

WHERE A.avg\_completion\_time < TA.final\_total\_average\_completion\_time;