

תרגיל בית 3 בקורס מסדי נתונים:

שאלות ב- SQL Server (חלק 2)

שם המערכת: "Top Gambling"

סמסטר: אביב, תשפ"ג

מחלקה: תעשייה וניהול

מגישים:

סטודנט 1 – עומר כהן - 208715813

סטודנט 2 - טל סטולר - 316465970

סטודנט 3 – אילון פישמן- 318404282

סטודנט 4- ברק קריף - 313131880

הנחות:

הנחות בסיסיות להבהרה לבודק התרגילים – עד עמוד. אין צורך לכתוב דברים הכתובים בסיפור המעשה, אלא רק הנחות ייחודיות לכם. אין חובה למלא סעיף זה.

שאלתה 1:

קוד השאלתה:

```
SELECT SM.ID AS MachineNumber, GT.gameName AS GameTypeName
FROM SlotMachine SM
INNER JOIN GameType GT ON SM.gameTypeNo = GT.gameTypeNo
WHERE NOT EXISTS (
    SELECT 1
    FROM RoundInSlot RIS
    WHERE RIS.slotID = SM.ID
    AND RIS.roundDateTime >= DATEADD(MONTH, -1, GETDATE())
    AND RIS.winAmount > 0
)
AND SM.ID IN (
    SELECT RIS.slotID
    FROM RoundInSlot RIS
    WHERE RIS.roundDateTime BETWEEN DATEADD(MONTH, -2, GETDATE()) AND
DATEADD(MONTH, -1, GETDATE())
    GROUP BY RIS.slotID
    HAVING COUNT(DISTINCT RIS.playerID) > 50
)
```

שאלתה 2:

קוד השאלתה:

```
SELECT P.ID, P.firstName + ' ' + P.surName AS FullName,
MAX(GIT.gameStartDateTime) AS GameDate
FROM Player P
INNER JOIN ParticipateIn PIN ON P.ID = PIN.playerID
INNER JOIN GameInATable GIT ON PIN.tableNumber = GIT.tableNumber AND
PIN.gameDateTime = GIT.gameStartDateTime
GROUP BY P.ID, P.firstName, P.surName
HAVING MAX(PIN.winLosAmount) =
(
    SELECT TOP 1 winLosAmount
    FROM ParticipateIn
    WHERE playerID = P.ID
    ORDER BY winLosAmount DESC
)
AND MAX(GIT.gameStartDateTime) =
(
    SELECT MAX(gameStartDateTime)
    FROM GameInATable GIT2
    JOIN ParticipateIn PI2 ON GIT2.tableNumber = PI2.tableNumber AND
GIT2.gameStartDateTime = PI2.gameDateTime
    WHERE PI2.playerID = P.ID
)
```

שאלתה 3:

קוד השאלתה:

```
SELECT P.ID, P.firstName + ' ' + P.surName AS FullName,
MAX(GIT.gameStartDateTime) AS GameDate
FROM Player P
INNER JOIN ParticipateIn PIN ON P.ID = PIN.playerID
INNER JOIN GameInATable GIT ON PIN.tableNumber = GIT.tableNumber AND
PIN.gameDateTime = GIT.gameStartDateTime
GROUP BY P.ID, P.firstName, P.surName
HAVING MAX(PIN.winLosAmount) =
(
    SELECT TOP 1 winLosAmount
    FROM ParticipateIn
    WHERE playerID = P.ID
    ORDER BY winLosAmount DESC
)
AND MAX(GIT.gameStartDateTime) =
(
    SELECT MAX(gameStartDateTime)
    FROM GameInATable GIT2
    JOIN ParticipateIn PI2 ON GIT2.tableNumber = PI2.tableNumber AND
GIT2.gameStartDateTime = PI2.gameDateTime
    WHERE PI2.playerID = P.ID
)
AND COUNT(DISTINCT GIT.gameStartDateTime) >= (
    SELECT COUNT(DISTINCT GIT3.gameStartDateTime) / 2
    FROM GameInATable GIT3
    JOIN ParticipateIn PI3 ON GIT3.tableNumber = PI3.tableNumber AND
GIT3.gameStartDateTime = PI3.gameDateTime
    WHERE PI3.playerID = P.ID
)
```

שאלתה 4:

קוד השאלתה:

```
SELECT
P.ID,
P.firstName + ' ' + P.surName AS FullName,
ISNULL(SUM(CAST(R.winAmount AS BIGINT)), 0) AS SlotMachineWinnings,
ISNULL(SUM(CAST(PIN.winLosAmount AS BIGINT)), 0) AS GameTableWinnings,
ISNULL(SUM(CAST(R.winAmount AS BIGINT)), 0) +
ISNULL(SUM(CAST(PIN.winLosAmount AS BIGINT)), 0) AS TotalWinnings
FROM
    Player P
LEFT JOIN
    RoundInSlot R ON P.ID = R.playerID
LEFT JOIN
    ParticipateIn PIN ON P.ID = PIN.playerID
GROUP BY
    P.ID, P.firstName, P.surName
```

שאלתה 5:

קוד השאלתה:

```
SELECT D.number AS DealerNumber, D.firstName + ' ' + D.surname AS DealerName,
CASE
    WHEN DATEDIFF(year, D.startWorkingDate, GETDATE()) < 3 THEN 'New dealer'
    WHEN DATEDIFF(year, D.startWorkingDate, GETDATE()) BETWEEN 3 AND 7 THEN
'Regular dealer'
    ELSE 'Old dealer'
END AS SeniorityCategory
FROM Dealer D
INNER JOIN
(
    SELECT G.DealerInGame, COUNT(*) AS NumberOfGames, SUM(P.betAmount) AS
TotalBets, SUM(P.winLosAmount) AS TotalWinnings
FROM GameInATable G
INNER JOIN ParticipateIn P ON G.tableNumber = P.tableNumber AND
G.gameStartDateTime = P.gameDateTime
WHERE MONTH(G.gameStartDateTime) = MONTH(GETDATE()) AND
YEAR(G.gameStartDateTime) = YEAR(GETDATE())
GROUP BY G.DealerInGame
) AS DealerStats ON D.number = DealerStats.DealerInGame
WHERE DealerStats.TotalWinnings < DealerStats.TotalBets AND
DealerStats.NumberOfGames
> (
    SELECT AVG(DealerGameCounts.NumberOfGames)
FROM (
    SELECT
        DealerInGame, COUNT(*) AS NumberOfGames
    FROM GameInATable
    WHERE MONTH(gameStartDateTime) = MONTH(GETDATE()) AND
YEAR(gameStartDateTime) = YEAR(GETDATE())
    GROUP BY DealerInGame
) AS DealerGameCounts
)
```