**Aggregation**

Monday, October 22, 2018  9:49 AM

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**Find all times when a salary changed**

- \[ \text{select distinct} \ E.\text{FromDate} \ \text{from Employee} \ union \ \text{select distinct} \ E.\text{ToDate} \ \text{from Employee} \]

**Build intervals during which all salaries remained the same**

- \[ \text{Select distinct start, stop} \]
  - \[ \text{From Instant start, Instant stop} \]
  - \[ \text{Where not exists (select * from Instant I where start < I and I < stop from Interval I)} \]

**For each interval, find the latest valid salary**

- \[ \text{Select max(S.Salary), I.FromDate, I.ToDate from EmployeeSalary S, Intervals I where SFromDate <= I.FromDate and I.ToDate <= S.ToDate group by I.FromDate, I.ToDate} \]

**Give the history of the maximum salary**

- \[ \text{select distinct F.SalaryMax, F.FromDate, L.ToDate from TempMax F, TempMax L where F.FromDate < L.ToDate and F.SalaryMax = L.SalaryMax and not exists (select * from TempMax M where M.SalaryMax = F.SalaryMax and F.ToDate < M.FromDate and M.FromDate <= L.FromDate and not exists (select * from TempMax T1 where T1.SalaryMax = F.SalaryMax and T1.FromDate < M.FromDate and M.FromDate <= T1.ToDate)) and not exists (select * from TempMax T2 where T2.SalaryMax = F.SalaryMax and (T2.FromDate <= F.FromDate and F.FromDate < T2.ToDate or T2.FromDate <= L.ToDate and L.ToDate < T2.ToDate))} \]

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