IT667 - Database Management Systems

Lab Assignment 9 - Query Processing and Optimization

```
SELECT ENAME
FROM EMP,ASG
WHERE EMP.ENO = ASG.ENO
AND RESP = "Manager"
```

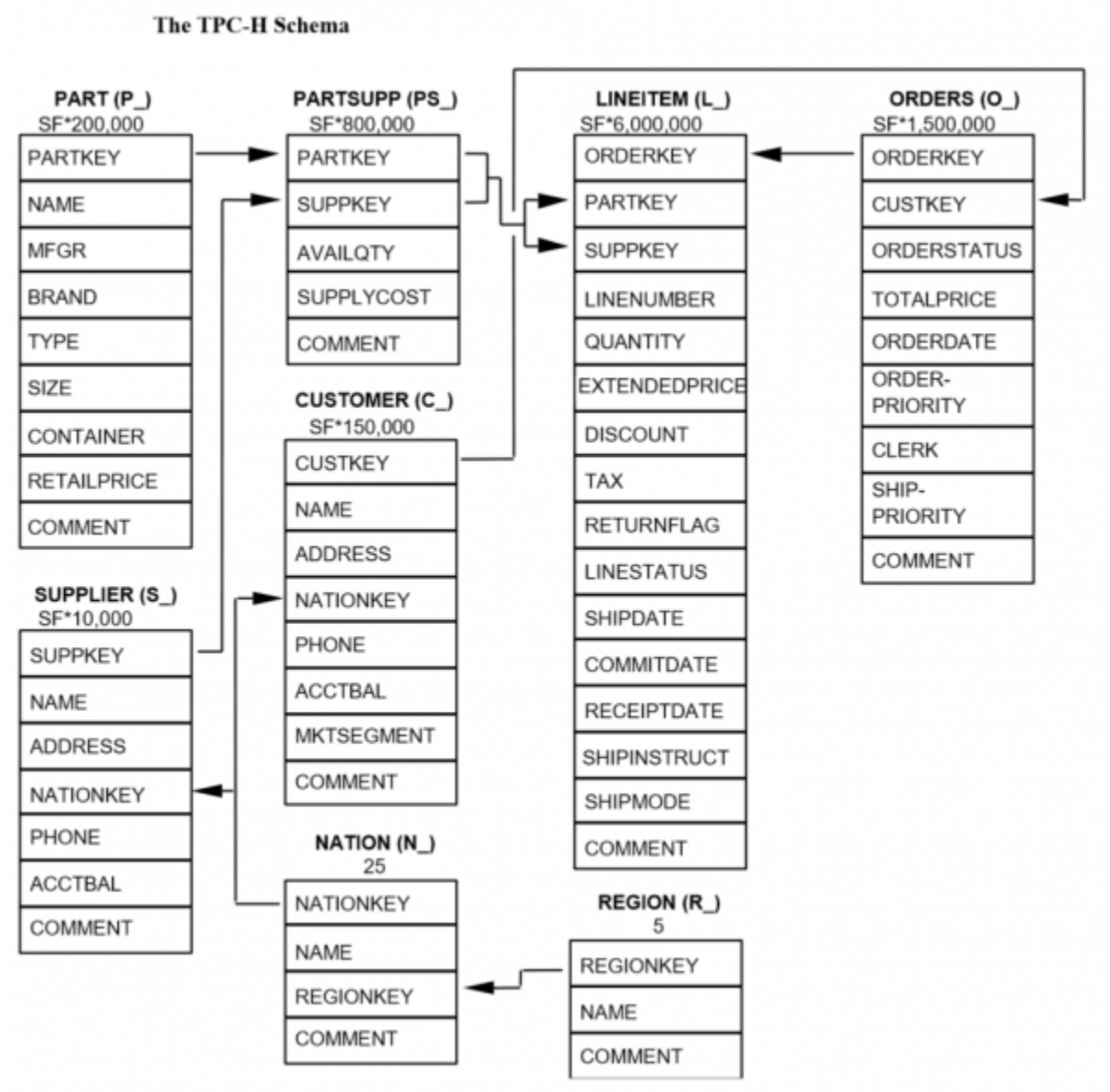
Consider a sample query as shown above.
To execute the following query, multiple ways are available, two of which can be:

1. $\Pi_{ENAME}(\sigma_{RESP=\text{“Manager”} \wedge EMP.ENO=ASG.ENO}(EMP \times ASG))$

2. $\Pi_{ENAME}(EMP \bowtie_{ENO} (\sigma_{RESP=\text{“Manager”}} (ASG))$

Now suppose the sizes of EMP and ASG are 400 and 1000 respectively. Now from the above two plans, Plan 2 (400*1000) will take less time than plan 1 (*No. of Managers*), as it does not perform full join over both tables. Rather, it filters first and then does the join.

Now consider the TCP_H Schema discussed in the previous sessions.



Task - With the table sizes mentioned, design **two** different query sets with two alternate execution plans by selecting multiple tables based on the above schema to analyse the query performance based on optimisation. You can use multiple techniques such as multiple joins Ax(BxC) and (AxB)xC based on the table sizes of A,B and C. Or the one which is mentioned above (Filter before join).