

1. Assume that you are new to Chennai and staying in VIT and you have access to the spatial database containing the details of customer location (eg: VIT), tourist places and hotels stored in cust, touristplace and hotel.

Write a spatial query to find the nearest hotel to your location.

Give me the name of the nearest hotel from the tourist location "GandhiMuseum".

Write a spatial query to list all the hotels which are within 30 miles radius from your location.

2. Assume that the customer data is split stored across 3 nodes N1, N2 and N3 using range partitioning vector (6, 11, 16) over the CustID column. The requirement is to sort the distributed customer data residing across these nodes based on the visits. How will you do a parallel sorting?

#### CUSTOMERS

CustID	Name	CityID	Visits
1	AB	101	100
2	BC	102	200
3	CD	103	50
4	DE	104	30
5	EF	105	90
6	FG	101	150
7	GH	102	480
8	HI	103	240
9	IJ	104	230
10	JK	105	220
11	KL	101	111
12	LM	102	101
13	MN	103	202
14	NO	104	303
15	OP	105	404

3. Assume that the city data has the following Details:

CID	CityName
-----	----------

101	Chennai
-----	---------

102	Pune
-----	------

103	Bengaluru
-----	-----------

104	Delhi
-----	-------

105	Mumbai
-----	--------

Perform a parallel join operation over the Customers and city tables by explaining each step in detail.