**Geographical relationship between two points based on latitude and longitude:**

On the database, any (lat,lon) pair with

Given a location of

(lat1,long1)

Imagine we need hotels within 100 KM to (X1,Y1), then:

D = sqrt((X2-X1)^2+(Y2-Y1)^2)

Convert (lat1,long2) to

(X1,Y1):

X1 = R \* cos(lat1) \* cos(lon1)

Y1 = R \* cos(lat)\*sin(lon1)

Where R is 6371 (The Earth’s radius in KM)