CSE 591: SPATIAL INFORMATICS

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Project Title: Identifying Proximal Hospitals to Residential Areas in Hyderabad City

Project Description: During a medical emergency in an area, it is important to have a map identifying nearby hospital facilities. Not only is such a map useful for the awareness purpose of residents, but it also helps in planning out logistics, cutting down travel time, location alternate hospital choices etc. This project will be carried out for the city of Hyderabad, and can be easily implemented for any other city.

Methodology:

1. We start off with a regular Google Earth search for a list of hospitals in Hyderabad. This will helps us give point locations as per Google's database, and we can export it as a .kml file.

2. We digitise the residential areas of Hyderabad or some part of Hyderabad over which we wish to do our research and we save it as polygons.

3. We now have a polygon layer containing all the residential areas in Hyderabad, and a point layer containing all the hospitals in the city.

4. We perform a spatial query based on a radial distance from each polygon, to find three nearest hospitals. We visualize the three hospitals appropriately, based on distance.

Assumptions In Our Data: We are assuming that we have correct data of residential areas as we ourselves have digitised it by hand.

Data Source/ Characteristics:

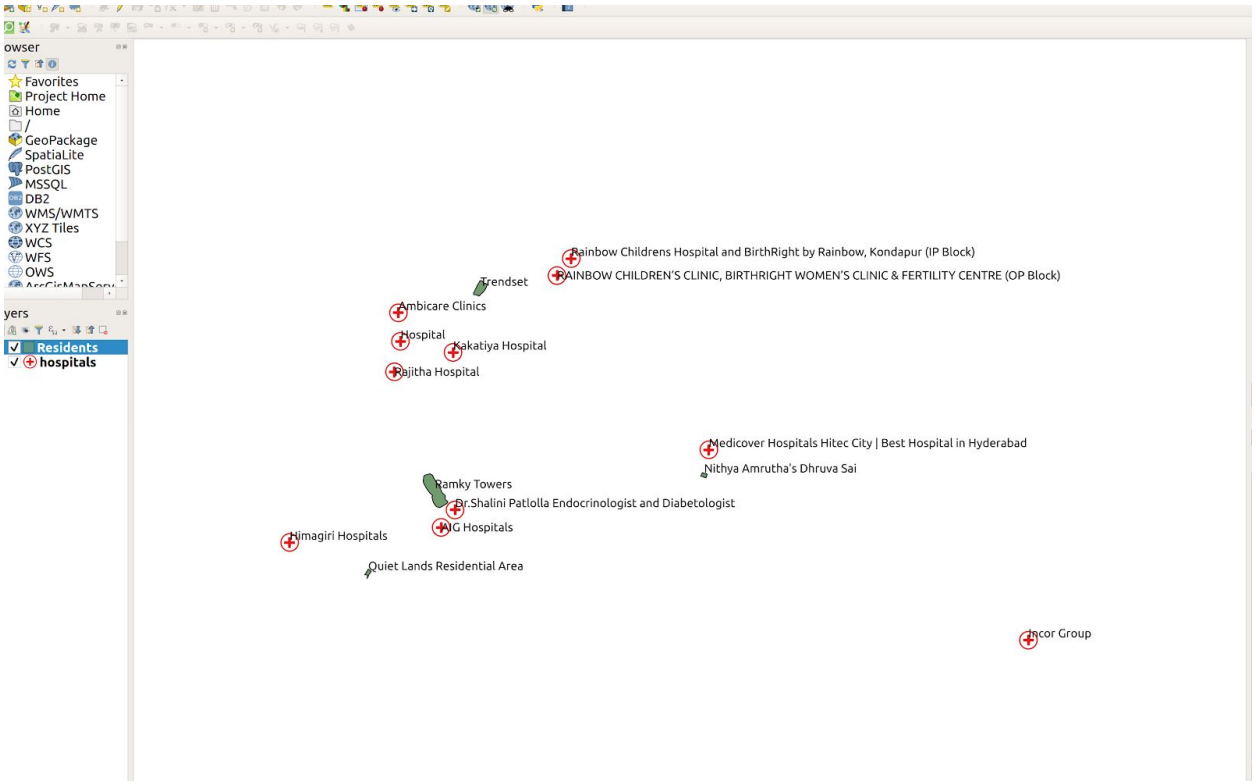
- The source of our data is Landsat imagery present on Google Earth.
- The characteristics of our hospital data is point data and it has the address of the

place and also some information in the url format like google reviews of the hospital and also phone number.

- The characteristics of our residential area data is point data.

GIS Methods: We would be using spatial queries in QGIS to extract the information about nearby hospitals to a particular residential area.

Intermediate Map:



Expected Output (On QGIS): A user selects a residential area (a polygon) and hospitals on close proximity get highlighted, with some sort of a differentiation based on their proximity from the residential area and maybe some of their characteristics.