
Assignment # 03: CE318L GIS/RS App. To CE (Geo. Info. Engg.) (Lab)

Submission Date: TBA in Class

Total Marks: 10

Note: Do as directed. Supplement your answers with screenshots and diagrams wherever necessary.

Scenario:

Local Govt. Department wants to buy a farm to build a new residential development for people who have had enough of Cape Town and Johannesburg. Some market research has already been carried out which states that a farm must satisfy the following requirements:

1. It needs to be in Swellendam.
2. You don't want to have to build a long access road (maximum distance 500 meters), and it has to be easily accessible from main routes
3. The people who make up the target market will probably have children, so it must be within a reasonable distance (by car) from a school (maximum 10 Km).
4. The farm must be between 100 and 150 hectares in area.

Required:

Your job is to select all available farm lands in the dataset that satisfy the above stated requirements by using QGIS.

Datasets Attached:

farms_33S, roads_33S, schools_33S (uploaded on the blog)

Note: The datasets are already projected to appropriate Projected Coordinate System (WGS 84/ UTM Zone 33S).

Hint:

The sequence of a GIS study is as follows:

1. State the Problem
2. Get the Data
3. Analyze the Problem
4. Present the Results

Hence you are required to follow the same sequence for carrying out this assignment as well as documenting the findings of this assignment.

This assignment require the use of spatial analysis tools (geoprocessing tools) and spatial query builder.