Answer Template for Spatial Databases Questions

QUESTION 1

|  |  |
| --- | --- |
| **Captions** | **Type for each caption the name of the Identified Toponym / named entity (if any)** |
| Grassland north of Eastdon |  |
| Wall north of Hulne Park |  |
| Farm track north of Aglionby |  |
| Long barrow north of Martin |  |
| A483 north of Pool Quay |  |
| Power line north of Dagnets Lane |  |
| Fields north of Ellington |  |
| Fields north of Belsey Bridge Road |  |
| Pasture north of Balhomish |  |
| The A22 north of South Godstone |  |
| Farm on track east of Hardwick |  |
| Un-named lane east of Clare |  |

|  |  |
| --- | --- |
| True Positives |  |
| False Positives |  |
| False Negatives |  |
| Precision |  |
| Recall |  |
| F1- value |  |

**INSERT HERE (OR ON FOLLOWING PAGES) YOUR**

**SCREEN SHOT OF RUNNING YOUR PROGRAM WITH ITS OUTPUT**

Your program will need to output THE FOLLOWING:

a) for each caption, with one line per caption:

the caption and the entity identified by SpaCy as a geographic feature

B) the values you have computed for true positive, false positive and false negative

C) the values you have computed for Precision, Recall and F1.

**QUESTION 2**

|  |
| --- |
| *Type here your explanation of what changes you made to the program in Q1* |

|  |  |
| --- | --- |
| **Captions** | **Type below for each caption the names of the Identified Toponym / named entity (if any) – otherwise leave blank** |
| Grassland north of Eastdon |  |
| Wall north of Hulne Park |  |
| Farm track north of Aglionby |  |
| Long barrow north of Martin |  |
| A483 north of Pool Quay |  |
| Power line north of Dagnets Lane |  |
| Fields north of Ellington |  |
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| Pasture north of Balhomish |  |
| The A22 north of South Godstone |  |
| Farm on track east of Hardwick |  |
| Un-named lane east of Clare |  |

|  |  |
| --- | --- |
| True Positives |  |
| False Positives |  |
| False Negatives |  |
| Precision |  |
| Recall |  |
| F1- value |  |

**INSERT SCREEN SHOT OF RUNNING YOUR PROGRAM WITH ITS OUTPUT**

Your program will need to output THE FOLLOWING:

a) for each caption, with one line per caption:

the caption and the entity identified by SpaCy as a geographic feature

b) the values you have computed for true positive, false positive and false negative

c) the values you have computed for Precision, Recall and F1.

**QUESTION 3**

|  |  |
| --- | --- |
| **Captions** | *Type* ***for each geocoded*** *caption the full address of the Identified Toponym, its coordinates and the distance from the guide coordinate. Otherwise leave blank.* |
| Grassland north of Eastdon |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Wall north of Hulne Park |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Farm track north of Aglionby |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Long barrow north of Martin |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| A483 north of Pool Quay |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Power line north of Dagnets Lane |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Fields north of Ellington |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Fields north of Belsey Bridge Road |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Pasture north of Balhomish |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| The A22 north of South Godstone |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Farm on track east of Hardwick |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Un-named lane east of Clare |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |

**QUESTION 3 Continued**

|  |  |
| --- | --- |
| True Positives |  |
| False Positives |  |
| False Negatives |  |
| Precision |  |
| Recall |  |
| F1- value |  |

**INSERT SCREEN SHOT OF RUNNING YOUR PROGRAM WITH ITS OUTPUT** that must include

a) for each geocoded caption, the full address of the Identified Toponym, as provided by Nominatim; its coordinates as latitude and longitude coordinates; and the distance in km units between the retrieved name and the guide coordinate.

b) the values you have computed for true positive, false positive and false negative

c) the values you have computed for Precision, Recall and F1.

**QUESTION 4**

|  |  |
| --- | --- |
| **Captions** | *Type* ***for each geocoded*** *caption the full address of the Identified Toponym, its coordinates and the distance from the guide coordinate. Otherwise leave blank.* |
| Grassland north of Eastdon |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Wall north of Hulne Park |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Farm track north of Aglionby |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Long barrow north of Martin |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| A483 north of Pool Quay |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Power line north of Dagnets Lane |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Fields north of Ellington |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Fields north of Belsey Bridge Road |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Pasture north of Balhomish |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| The A22 north of South Godstone |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Farm on track east of Hardwick |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Un-named lane east of Clare |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |

**QUESTION 4 Continued**

|  |  |
| --- | --- |
| True Positives |  |
| False Positives |  |
| False Negatives |  |
| Precision |  |
| Recall |  |
| F1- value |  |

|  |
| --- |
| *Insert here a simple but clear description of the methods that you used.* |

**INSERT SCREEN SHOT OF RUNNING YOUR PROGRAM WITH ITS OUTPUT** that must include

a) for each geocoded caption, the full address of the **single** Identified Toponym from Nominatim, as found by your method; its coordinates as latitude and longitude coordinates; and the distance in km units between the retrieved name and the guide coordinate.

b) the values you have computed for true positive, false positive and false negative

c) the values you have computed for Precision, Recall and F1.

**QUESTION 5**

|  |
| --- |
| 1. *Insert here a listing of the text file that you used as input to QGIS or ArcGIS* |

1 mark for appropriately structured text file – 3 columns with headings of caption (doesn’t matter exactly what called, “latitude” and “longitude”

|  |
| --- |
| 1. *Insert here a brief explanation of how you created the data layer in QGIS or ArcGIS* |

1 mark for a very clear explanation – 0.5 for less clear and 0 for poor or absent explanation

**INSERT HERE A SCREEN SHOT** of a map of the point locations of the captions. Note that the points must be clearly visible, and ideally labelled with the corresponding caption text. You could also add some background map data for Britain to provide context.

1 mark for markers in correct location relative to coastline backdrop (0.5 of no background map)

1 mark for correct labels against each location.

**QUESTION 6 – 5marks**

|  |
| --- |
| 1. *Insert here a brief explanation of how you created the Oracle table, i.e. converting from the data generated in task 4.* |

1 mark for clear explanation of creation of the oracle table

|  |
| --- |
| 1. *write the two SQL queries and their outputs (not screenshots)* |

2 marks for each correct SQL question and output

**INSERT HERE A SCREENSHOT of** of the two SQL queries and their outputs.

**QUESTION 7**

|  |  |
| --- | --- |
| **Captions** | *Type* ***for each geocoded*** *caption the full address of the Identified Toponym, its coordinates and the distance from the guide coordinate. Otherwise leave blank.* |
| Grassland north of Eastdon |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Wall north of Hulne Park |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Farm track north of Aglionby |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Long barrow north of Martin |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| A483 north of Pool Quay |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Power line north of Dagnets Lane |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Fields north of Ellington |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Fields north of Belsey Bridge Road |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Pasture north of Balhomish |  |
| Latitude, Longitude Coordinates |  |
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| Latitude, Longitude Coordinates |  |
| Distance |  |
| Farm on track east of Hardwick |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |
| Un-named lane east of Clare |  |
| Latitude, Longitude Coordinates |  |
| Distance |  |

**QUESTION 7 Continued**

|  |  |
| --- | --- |
| True Positives |  |
| False Positives |  |
| False Negatives |  |
| Precision |  |
| Recall |  |
| F1- value |  |

|  |
| --- |
| 1. *Insert here a clear explanation of what Python NER tool that you used (with a link to the Python software and its required library installs and imports in Python), and how you used it.* |

**INSERT SCREEN SHOT OF RUNNING YOUR PROGRAM WITH ITS OUTPUT** that must include

a) for each geocoded caption, the full address of the **single** Identified Toponym, as found by your method; its coordinates as latitude and longitude coordinates; and the distance in km units between the retrieved name and the guide coordinates;

b) the values you have computed for true positive, false positive and false negative;

c) the values you have computed for Precision, Recall and F1.