Part I

Sparql Endpoint:

http://patho.phenomebrowser.net/sparql/

1 Graphs research

1.1 Queries for graphs and results

```
graph all_graphs_included.sparql: 1 results
graph graphs_with_a_triple_min.sparql: 100 results
graph graphs_with_rdf_type.sparql: 100 results
The graphs_with_rdf_type.sparql returns more results (100)
```

1.2 List of graphs selected

```
graph 1 - http://www.openlinksw.com/schemas/virtrdf#
graph 2 - http://www.w3.org/2002/07/owl#
graph 3 - http://www.w3.org/2002/07/owl
graph 4 - http://localhost:8890/sparql
graph 5 - http://purl.obolibrary.org/obo/MP 0011164
graph 6 - http://purl.obolibrary.org/obo/DOID 0050012
graph 7 - http://purl.obolibrary.org/obo/DOID 0050059
graph 8 - http://purl.obolibrary.org/obo/DOID 0050118
graph 9 - http://purl.obolibrary.org/obo/DOID 0050125
graph 10 - http://purl.obolibrary.org/obo/DOID 0050133
graph 11 - http://purl.obolibrary.org/obo/DOID 0050136
graph 12 - http://purl.obolibrary.org/obo/DOID 0050143
graph 13 - http://purl.obolibrary.org/obo/DOID 0050155
graph 14 - http://purl.obolibrary.org/obo/DOID 0050160
graph 15 - http://purl.obolibrary.org/obo/DOID 0050175
graph 16 - http://purl.obolibrary.org/obo/DOID 0050179
graph 17 - http://purl.obolibrary.org/obo/DOID 0050183
graph 18 - http://purl.obolibrary.org/obo/DOID 0050195
graph 19 - http://purl.obolibrary.org/obo/DOID 0050204
graph 20 - http://purl.obolibrary.org/obo/DOID 0050211
graph 21 - http://purl.obolibrary.org/obo/DOID 0060478
graph 22 - http://purl.obolibrary.org/obo/DOID 10264
```

```
graph 23 - http://purl.obolibrary.org/obo/DOID 10841
graph 24 - http://purl.obolibrary.org/obo/DOID 11079
graph 25 - http://purl.obolibrary.org/obo/DOID 11263
graph 26 - http://purl.obolibrary.org/obo/DOID 11302
graph 27 - http://purl.obolibrary.org/obo/DOID 12365
graph 28 - http://purl.obolibrary.org/obo/DOID 8469
graph 29 - http://purl.obolibrary.org/obo/DOID 2929
graph 30 - http://purl.obolibrary.org/obo/DOID 2934
graph 31 - http://purl.obolibrary.org/obo/DOID_2945
graph 32 - http://ddiem.phenomebrowser.net
graph 33 - http://ddiem.phenomebrowser.net/test
graph 34 - http://purl.obolibrary.org/obo/MP 0001194
graph 35 - http://purl.obolibrary.org/obo/MP 0002461
graph 36 - http://purl.obolibrary.org/obo/MP 0002490
graph 37 - http://purl.obolibrary.org/obo/MP 0002493
graph 38 - http://purl.obolibrary.org/obo/MP_0020174
graph 39 - http://purl.obolibrary.org/obo/MP 0001575
graph 40 - http://purl.obolibrary.org/obo/MP 0001800
graph 41 - http://purl.obolibrary.org/obo/MP 0001819
graph 42 - http://purl.obolibrary.org/obo/MP 0001845
graph 43 - http://purl.obolibrary.org/obo/MP 0001847
graph 44 - http://purl.obolibrary.org/obo/MP 0001858
graph 45 - http://purl.obolibrary.org/obo/MP 0001860
graph 46 - http://purl.obolibrary.org/obo/MP 0001861
graph 47 - http://purl.obolibrary.org/obo/MP 0001953
graph 48 - http://purl.obolibrary.org/obo/MP 0001983
graph 49 - http://purl.obolibrary.org/obo/MP 0002090
graph~50~-~http://purl.obolibrary.org/obo/MP~~0002418
graph 51 - http://purl.obolibrary.org/obo/MP 0002442
graph 52 - http://purl.obolibrary.org/obo/MP 0002452
graph 53 - http://purl.obolibrary.org/obo/MP 0002459
graph 54 - http://purl.obolibrary.org/obo/MP 0002816
graph 55 - http://purl.obolibrary.org/obo/MP 0003158
graph 56 - http://purl.obolibrary.org/obo/MP 0003304
graph 57 - http://purl.obolibrary.org/obo/MP \, 0003631
graph 58 - http://purl.obolibrary.org/obo/MP 0003689
graph 59 - http://purl.obolibrary.org/obo/MP 0005408
graph 60 - http://purl.obolibrary.org/obo/MP 0001846
graph 61 - http://purl.obolibrary.org/obo/MP 0001851
graph 62 - http://purl.obolibrary.org/obo/MP 0003541
graph 63 - http://purl.obolibrary.org/obo/MP 0003633
```

```
graph 64 - http://purl.obolibrary.org/obo/MP 0004947
graph 65 - http://purl.obolibrary.org/obo/MP 0005253
graph 66 - http://purl.obolibrary.org/obo/MP 0005387
graph 67 - http://purl.obolibrary.org/obo/MP 0005501
graph 68 - http://purl.obolibrary.org/obo/MP 0006082
graph 69 - http://purl.obolibrary.org/obo/MP 0012565
graph 70 - http://purl.obolibrary.org/obo/MP 0013139
graph 71 - http://purl.obolibrary.org/obo/MP 0001862
graph 72 - http://purl.obolibrary.org/obo/MP 0002406
graph 73 - http://purl.obolibrary.org/obo/MP 0020185
graph 74 - http://purl.obolibrary.org/obo/MP 0009792
graph 75 - http://purl.obolibrary.org/obo/ECO 0000203
graph 76 - http://purl.obolibrary.org/obo/ECO 0000218
graph 77 - http://purl.obolibrary.org/obo/NCBITaxon 100588
graph 78 - http://purl.obolibrary.org/obo/NCBITaxon 10376
graph 79 - http://purl.obolibrary.org/obo/NCBITaxon_1048829
graph 80 - http://purl.obolibrary.org/obo/NCBITaxon 1131
graph 81 - http://purl.obolibrary.org/obo/NCBITaxon 121759
graph 82 - http://purl.obolibrary.org/obo/NCBITaxon 1239
graph 83 - http://purl.obolibrary.org/obo/NCBITaxon 1392
graph 84 - http://purl.obolibrary.org/obo/NCBITaxon 1489895
graph 85 - http://purl.obolibrary.org/obo/NCBITaxon 1578
graph 86 - http://purl.obolibrary.org/obo/NCBITaxon 11029
graph 87 - http://purl.obolibrary.org/obo/NCBITaxon 11082
graph 88 - http://purl.obolibrary.org/obo/NCBITaxon 11084
graph 89 - http://purl.obolibrary.org/obo/NCBITaxon 11089
graph 90 - http://purl.obolibrary.org/obo/NCBITaxon 11120
graph 91 - http://purl.obolibrary.org/obo/NCBITaxon 28314
graph 92 - http://purl.obolibrary.org/obo/NCBITaxon 6231
graph 93 - http://purl.obolibrary.org/obo/NCBITaxon 6656
graph 94 - http://purl.obolibrary.org/obo/NCBITaxon 100815
graph 95 - http://purl.obolibrary.org/obo/NCBITaxon 100816
graph 96 - http://purl.obolibrary.org/obo/NCBITaxon 102793
graph 97 - http://purl.obolibrary.org/obo/NCBITaxon 104724
graph 98 - http://purl.obolibrary.org/obo/NCBITaxon 1049
graph 99 - http://purl.obolibrary.org/obo/NCBITaxon 10535
graph 100 - http://purl.obolibrary.org/obo/NCBITaxon 1094346
```

2 Querying http://patho.phenomebrowser.net/sparql/

2.1 Results by query

```
Query class.sparql - distinct results : 201
Query label_class.sparql - distinct results : 41
Query label_property.sparql - distinct results : 46
Query subclass.sparql - distinct results : 27
Query subproperty.sparql - distinct results : 2
Query subproperty.sparql - distinct results : 54
Query property_domain.sparql - distinct results : 52
Query property_range.sparql - distinct results : 52
Query indi_range_property.sparql - distinct results : 138
Query indi_domain_property.sparql - distinct results : 423
Query entity_type.sparql - distinct results : 12550
Total of unique results found 13600 on http://patho.phenomebrowser.net/sparql/
```

2.2 Error Log

No errors encountered during the process

• Number of errors : 0

3 Process before indexation

3.1 JSON results conversion after distinct operation

All string results were converted into valid json results

4 Partition in separated queries

The volume of 13600 results does not need query partition

5 Elastic Search Indexation

Index 'class' already exits and will be completed Storing 66 results in index 'class' took 1.201 secs

Index 'property' already exits and will be completed Storing 201 results in index 'property' took 0.277 secs

Index 'label_class' already exits and will be completed Storing 41 results in index 'label_class' took 0.092 secs

Index 'label_property' already exits and will be completed Storing 46 results in index 'label_property' took 0.265 secs

Index 'subclass' already exits and will be completed Storing 27 results in index 'subclass' took 0.038 secs

Index 'subproperty' already exits and will be completed Storing 2 results in index 'subproperty' took 0.149 secs

Index 'property_domain' already exits and will be completed Storing 54 results in index 'property_domain' took 0.043 secs

Index 'property_range' already exits and will be completed Storing 52 results in index 'property range' took 0.042 secs

Index 'indi_range_property' already exits and will be completed Storing 138 results in index 'indi_range_property' took 0.123 secs

Index 'indi_domain_property' already exits and will be completed Storing 423 results in index 'indi_domain_property' took 0.077 secs

Index 'entity_type' already exits and will be completed Storing 12550 results in index 'entity_type' took 2.01 secs

6 Getting results and indexing times

Getting results for http://patho.phenomebrowser.net/sparql/ took 18 min (1125.051 secs)

Indexation for http://patho.phenomebrowser.net/sparql/ took 0 min (16.855 secs)