**YTU-CE: Semantic Web Graduate Course   
Fall 2016   
Homework Assignment  
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This homework based on organization schema of the Central Bank of Republic of Turkey. There is 5 owl files that includes the structure showed in TCMB\_orgChart.jpg. Since there are too much classes and properties in the schema, therefore it would require too much manual effort to implement, to avoid this complexity, in the project Protégé is used. A view of the owl classes can be found in cbrtClassHieararchy.jpg.

Object Models –POJOs- Created with Protégé.

For validating owl files, OWL API is used.

For combining the files, JENA API is used.

For gathering hierarchy from the files, JENA ModelFactory is used.

For gathering inference from the files, JENA InfModel and JENA reasoner is used.

For querying the files, SPARQL is used.

For trying these services unit tests can be run.