

# Lab report

## Task 2

February 2018

### 1 E-R model

We designed the ER diagram using Query Converter. The resulting ER schema is the same as the schema given in Task 1, except for the UNIQUE constraints. This is because Query Converter does not generate UNIQUE constraints and so we added these to the schema manually.

### 2 Functional dependencies

We began by collecting all the attributes from our ER diagram and put them all in one table that represents the domain. We then identified all the functional dependencies for the domain and used Query Converter to generate a schema based on the FDs. Lastly, we performed BCNF analysis manually by following the BCNF normalization algorithm in order to get correct references for the tables.

### 3 Comparison

The number of tables generated from the ER schema is greater than the number of tables generated from FDs. We conclude that FDs can be used to generate a more compact schema with less tables by adding more constraints.