



National University of Sciences and Technology (NUST)
School of Electrical Engineering and Computer Science

Department of Computing

SE312: Software Construction

Class: BESE – 5 AB

Lab 5: City Search

Date: March 29th, 2017

Time: Wednesday (10:00 – 13:00), Wednesday (14:00 – 17:00)

Instructor: Fahad Ahmed Satti



Lab 5: City Search

Introduction:

We had to come up with a system that parsed a given CSV file, added CSV entries into a database using ORM and finally allowed a user to search the database.

Approach:

For parsing the CSV files I used **CSVReader** library which I imported using Maven.

I looped over all CSV entries and added created **GeoLiteCity** objects out of the given values.

Next I used the ORM library **Hibernate** to connect to a database I had created. I created **Configuration** file that connected to the database and **Mapping** file that mapped database columns to fields in the **GeoLiteCity** class.

Next I persisted the values (already mapped using Hibernate) into the database.

Finally I implemented The Great Circle Distance function that allowed me to calculate the distance between two points (given their latitude and longitude). Using this formula I was able to find the 5 nearest cities to a given point or city.

Github Link: <https://github.com/14beseasalman/lab5>