Prerequisites:

The tool is mainly based on Cassandra and Python

**Cassandra & Python Installation Steps**

The latest version of Cassandra is given in the link

Steps to install:

<http://mirrors.estointernet.in/apache/cassandra/3.11.4/apache-cassandra-3.11.4-bin.tar.gz>

* Download and install JDK 1.8 from the oracle downloads page.
* Set JAVA\_HOME to <path-to- jdk 1.8>
* Download and install Python 2.7.Cassandra CQL is a python-based utility and it has issues with other versions of python. Hence use version 2.7.
* Python 2.7 can be installed from the given link: <https://www.python.org/downloads/release/python-2716/>
* Add the path to bin folder to environment variable path
* Make changes to the configuration files(Files in <Cassandra\_folder>\apache-cassandra-3.11.0\conf )
* Set CASSANDRA\_HOME to <Cassandra\_folder>\apache-cassandra-3.11.0

After that navigate to

<Cassandra\_folder>\apache-cassandra-3.11.0\bin

* Open Cassandra.bat in a notepad and edit the same. Add below line to the same

set Java\_home= <path to JDK 1.8>

\*\*optional\*\* Search for the text ‘JAVA\_OPTS’ and change the java memory opts. Initially it will be set to 2G.You can change it to 512M or 1G whichever is fine for you.

* Start Cassandra server by navigating to below path and execute Cassandra.bat.

<Cassandra\_folder>\apache-cassandra-3.11.0\bin\

**For API to work:**

In order to get this API working, the required packages of python that are to be installed are:

* Flask:

Run the command

pip install flask,flask\_cors, pythonlangutil

if pip not installed , then

Create a file get-pip.py and copy the code given in the link (<https://bootstrap.pypa.io/get-pip.py> ),then run the python file

python get-pip.py

Then set the path by adding Python<version>/Scripts

Ex: If python version is 2.7,then

Python27/Scripts(for windows)

Now check,by running the command

pip freeze

If you want to update the pip ,then run

python -m pip install –upgrade pip

* **cs\_**reloaded:

<https://github.com/aravind7899/project>

**Functions defined in the API:**

**getAllKeyspaces()** – returns the keyspaces that are already created

METHOD :GET

URL: <http://localhost:8081/keyspaces>

**getAllTables(keyspace)** – returns the tables that are in the keyspace

METHOD :GET

URL: [http://localhost:8081/<keyspace>/tables](http://localhost:8081/%3ckeyspace%3e/tables)

**createtable(keyspace)** – This function requests the data from the user(tablename , column&datatypes, primary key) and creates tablebased on the given data

METHOD :POST

Route: [http://localhost:8081/<keyspace>/create\_table](http://localhost:8081/%3ckeyspace%3e/create_table)

Format:

{"table\_name":"abc","columns":{"node":"text","id":"int","created":"bigint","updated":"bigint"},"primary\_key":{"partition\_key":["node"],"clustering\_keys":["created","id"]}}

**droptable(keyspace,table\_name)** – This function removes all the rows of the data in the table of a keyspace and also the structure of the table is removed permanently

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/drop](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/drop)

**createindex(keyspace,table\_name,column)** – This function creates index on a particular column given of a table in a keyspace

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/<column>/create\_index](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/%3ccolumn%3e/create_index)

**dropindex(keyspace,table\_name,column)** – This function drops index on a particular column given of a table in a keyspace

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/<column>/drop\_index](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/%3ccolumn%3e/drop_index)

**getprkeys(keyspace,table\_name)** – returns the primary key columns ,specifying the partition key and clustering keys of a table

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/primary\_key](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/primary_key)

**getAllDetails(keyspace,table\_name)** – returns the whole data of a particular table in a keyspace in a JSON format

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/display\_all](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/display_all)

**Columns(keyspace,table\_name)** – returns the columns of a table in the keyspace

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/)

**getwithcondition(keyspace,table\_name)** – returns the filtered data of a particular table in a keyspace in JSON format with a condition given from user as querystring

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/display?<condition](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/display/?%3ccondition)>

**insertData(keyspace,table\_name)** – This inserts a single row data that is requested from the user into a particular table of a keyspace

METHOD :POST

URL: [http://localhost:8081/<keyspace>/<table\_name>/insert](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/insert)

**insertFileData(keyspace,table\_name,filename)** – This inserts the data in the file that is requested from the user into a particular table of a keyspace

METHOD :GET

URL: [http://localhost:8081/<keyspace>/<table\_name>/insert/<filename](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/insert/%3cfilename)>

**updateData(keyspace,table\_name)** – This function takes data to be updated and the condition from the user and then updates the data

METHOD :PUT

URL: [http://localhost:8081/<keyspace>/<table\_name>/update?<set\_condition>](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/update?%3cset_condition%3e)

Body: Primary key columns

**deleteData(keyspace,table\_name)** – This function deletes the data in particular table of a keyspace by taking the condition request from the user

URL: [http://localhost:8081/<keyspace>/<table\_name>/delete?<condition](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/delete?%3ccondition)>

METHOD :DELETE

Condition – partition key column

**truncate(keyspace,table\_name)** – This function removes all the rows of the data in the table of a keyspace are removed permanently

METHOD :DELETE

URL: [http://localhost:8081/<keyspace>/<table\_name>/truncate](http://localhost:8081/%3ckeyspace%3e/%3ctable_name%3e/truncate)

The arguments of the functions will be taken from the URL