<https://www.tutorialspoint.com/cassandra/cassandra_cqlsh.htm>

- tu wiele nodów

- wszystko zapisywane pod odpowiednie partition

- prosty jezyk, bez schemy, nie ma ACID, nie ma transakcji

- distributed and decentralized/distributed storage system (database), for managing very large amounts of structured data spread out across the world. It provides highly available service with no single point of failure.

- features of Cassandra:

* **Elastic scalability** - Cassandra is highly scalable; it allows to add more hardware to accommodate more customers and more data as per requirement.
* **Always on architecture** - Cassandra has no single point of failure and it is continuously available for business-critical applications that cannot afford a failure.
* **Fast linear-scale performance** - Cassandra is linearly scalable, i.e., it increases your throughput as you increase the number of nodes in the cluster. Therefore it maintains a quick response time.
* **Flexible data storage** - Cassandra accommodates all possible data formats including: structured, semi-structured, and unstructured. It can dynamically accommodate changes to your data structures according to your need.
* **Easy data distribution** - Cassandra provides the flexibility to distribute data where you need by replicating data across multiple data centers.
* **Transaction support** - Cassandra supports properties like Atomicity, Consistency, Isolation, and Durability (ACID).
* **Fast writes** - Cassandra was designed to run on cheap commodity hardware. It performs blazingly fast writes and can store hundreds of terabytes of data, without sacrificing the read efficiency.

**No**dy są niezalezne, wszystkie read/write, jak jakis padnie to do innego idziemy

Dane pobierane z node przez – cassandra query language – CQL traktuja **keyspace** (database) jak kontener tabel.

Write Operations

Every write activity of nodes is captured by the **commit logs** written in the nodes. Later the data will be captured and stored in the **mem-table.** Whenever the mem-table is full, data will be written into the **SStable** data file. All writes are automatically partitioned and replicated throughout the cluster. Cassandra periodically consolidates the SSTables, discarding unnecessary data.

Read Operations

During read operations, Cassandra gets values from the mem-table and checks the bloom filter to find the appropriate SSTable that holds the required data.

* Tu rodzina kolumn, nie ma, ze tabela zdefiniowane kolumny, mozna dodac kolumny , wiersz moze miec kilka kolumn jakie chce
* -----------------

Tworząc tabele musimy primary\_key zdefiniować

