**Ineuron assignment 4**

Question-1: Explain the difference between cassandra and typical databases.

Ans: Cassandra:

1. Cassandra is a high performance and highly scalable distributed NoSQL database management system.

2. Cassandra is a NoSQL database.

3. It deals with unstructured data

4. It has a flexible schema

5. architecture with no single point of failure.

6. Cassandra handles high volume incoming data velocity.

7. In RDBMS there is limited data source means data come from many locations.

8. It supports simple transactions.

RDBMS:

1.RDBMS is a Database management system or software which is designed for relational databases.

2.RDBMS uses SQL for querying and maintaining the database.

3.It deals with structured data.

4.It has fixed schema.

5.RDBMS has master-slave core architecture means a single point of failure.

6.RDBMS handles moderate incoming data velocity.

7.In Cassandra there are various data source means data come from one/few location.

8.It supports complex and nested transactions.

Question-2: what exactly is CQLSH?

Ans:cqlsh is a command-line interface for interacting with Cassandra using CQL (the Cassandra Query Language). It is shipped with every Cassandra package, and can be found in the bin/ directory alongside the cassandra executable.

we will go through Cassandra CQLSH. We will learn about CQLSH in Cassandra and how to use it to perform different operations like Documented Shell Commands, Data Definition Commands, Data Manipulation Commands, and CQL Clauses.

So, let’s start CQLSH tutorial.

communication medium between Cassandra and the user. CQLSH is a platform that allows the user to launch the Cassandra query language (CQL).

The user can perform many operations using cqlsh. Some of them include: defining a schema, inserting and altering data, executing a query etc..

It basically is a coding platform for Cassandra. Hence, a user can program Cassandra to work according to his requirement.

CQLSH allows the user to use these commands. These commands are basically used for displaying the documentation for different features of Cassandra Query Language Shell.

Using these commands, a user can also perform certain tasks.

Some of the commands are:

Help – This command is used to display the documentation on help topics on cqlsh

Exit – This command is used to exit from cqlsh prompt.

Describe – This command displays the description of the current cluster and its objects.

Expand – This command is used to expand the output of the query vertically.

Question-3: Explain the Cassandra cluster idea.

Ans:A Cassandra cluster does not have a single point of failure as a result of the peer-to-peer distributed architecture. Nodes in a cluster communicate with each other for various purposes. There are various components used in this process: Seeds: Each node configures a list of seeds which is simply a list of other nodes.

In this Cassandra tutorial, we will go through one of the main parts of the Cassandra database i.e. Cassandra Cluster. Moreover, we will see the meaning of Cluster and different layers in Cluster. This article will guide through the parts of the cluster and the builders associated with it.

The cluster is a collection of nodes that represents a single system. A cluster in Cassandra is one of the shells in the whole Cassandra database. Many Cassandra Clusters combine together to form the database in Cassandra.

A Cluster is basically the outermost shell or storage unit in a database. The Cassandra Cluster contains many different layers of storage units. Each layer contains the other.

a. Node Cluster

Node is the second layer in a cluster. This layer basically comprises of systems or computers or storage units. Each cluster may contain many nodes or systems. These systems or nodes are connected together.

They collectively share data through the replication in Cassandra and independently as well. The replication factor in the nodes allows the user to have a redundancy for the data stored.

b. Keyspace

The keyspace is the next layer of the storage. In a node, there are many keyspaces. These keyspaces are basically the outermost storage unit in a system. They contain the main data. The data distributed according to their properties or areas.

c. Column Families

The next layer is the column families. The keyspace is further divided into column families. These column families have different areas or headings under which the data is distributed. In a keyspace, these column families are categorized into different headings or titles.

These titles further contain different layers of storage units. These column families can also be characterized by tables. The column families differ from the tables through their APIs.

d. Rows

The next layer in the database is of the Rows as according to column families. The Rows are basically the classification under which the column family is divided. These classifications, in turn, create specific distribution criteria for the entries.

e. Column

This is the innermost layer in a database. The column basically is divided into different titles or headings. These headings contain the main data regarding the specific entry.

Question-4: Give an example to demonstrate the class notion.

Ans:Getting your shoes fixed at the cobbler is a pretty straightforward task, easily handled by any to-do list app. Yet in the viral Buzzfeed piece on Millennial Burnout, Anne Helen Petersen struggles to figure out why “small, straightforward tasks on my to-do list felt so impossible.” My theory: we’re suffering from app fatigue and productivity paralysis? We’re overwhelmed by the sheer volume of apps out there aimed at making slivers of our lives more productive. But there’s a new app in town, one that promises to streamline your to-do list, note-taking, calendar, kanban, wikis, spreadsheets, and databases into a unified platform: meet Notion.

Legos without the instructions

My 6 year old is getting really good at Legos and has mastered the 500-piece sets that recreate an entire town. The number of pieces isn’t daunting thanks to the extensive instructions that come with each set.

Notion is like a giant set of legos – by putting the various components together, you can create a simple tree house or the Eiffel Tower. The uses cases are extensive, ranging from mood boards, net worth trackers, and personal life dashboards. But there’s a catch – open the app and you’re greeted by a blank page. Literally, just a flashing cursor.

Your first Notion Tutorial

We’ve created an interactive guide (think case study) with two purposes: teaching you how to use each component (or feature) while having you build your own Notion workspace so that you can master the Notion app yourself.

1. An introduction to Notion

I’ve got a track record of spotting game-changing productivity tools. Omnifocus in 2008. Evernote in 2010. Airtable in 2015. My obsession with productivity is quite simple. When I’m not organized, I’m anxious. And when I’m anxious, I don’t show up for the most important parts of my life: my family, my health, and my business. Notion finally gave me the pieces to unify all my disparate systems.

2. Getting set up

Before you get started, make sure you take the following 4 steps:

Download the app (iOS and Android)

Download the Desktop App (Mac and Windows)

Install the Notion Web Clipper

Grab your share link (to earn referral credits)

3. Navigating the Sidebar and your Workspace

In this video, you’ll learn about the sidebar, on-page navigation, and manipulating blocks. Your left sidebar will serve as your hub for navigation, acting like a Finder/File Explorer. Your top sidebar will also facilitate navigation with breadcrumbs and search.

4. Understanding Blocks

Everything is a block – text, headers, images, databases, quotes, and other pages. What makes blocks special is that they’re recursive, meaning that a block (i.e. a table can be comprised of other pages) can contain another block.

Here’s a list of Notion’s basic blocks:

Text

Headers

Images

Toggle Lists

To-do lists

Tables

Call-outs

Embeds (Video, Maps).

5. Understanding how “Pages” work

Pages are where you aggregate all the blocks listed above and are Notion’s equivalent to files. As we’ll later see, pages are the core building blocks of Tables and Databases.

As you write, you can highlight text to add bold, italics, and pre-formatted code. You will also notice that you can insert a new block by simply typing the “/” command.

Question-5: Use an example to explain the object.

Ans:An object is an entity having a specific identity, specific characteristics and specific behavior. Taking a car as an example of an object, it has characteristics like colour, model, version, registration number, etc. It has behaviours like start the engine, stop the engine, accelerate the car, apply the brakes, etc.

In grammar, an object is a noun, pronoun, or noun phrase on which a verb performs an action. It falls at the end of a sentence, and is governed by a verb or a preposition. For example, in the excerpt, “My aunt opened her purse and gave the man a quarter … It was Valentine’s Day and she had baked me a whole box of heart-shaped biscuits” (The Amnesia, by Sam Taylor), “man” and “me” are indirect objects governed by their respective verbs “gave” and “baked.”

There are three types of object:

1. Direct Object:

A direct object in a sentence is directly acted upon by a subject such as, “All the actors have played their parts.”

2. Indirect Object

An indirect object in a sentence is the recipient of the action performed by the subject such as, “Pauline has passed her mother a parcel.”

3. Object of Preposition

The object of preposition is a noun or pronoun managed by a prepositions such as, “The cat gets in their house when they are sleeping.”

Examples of Objects :

Literature

Example #1: Charlotte’s Web (by E.B. White)

“She closed the carton carefully. First she kissed her father, then she kissed her mother. Then she opened the lid again, lifted the pig out, and held it against her cheek.”

In this example, “carton” and “lid” are direct objects. “Her father,” and her mother” are indirect objects because they are the recipients of actions in these sentences.

Example #2: A Tale of Two Cities (by Charles Dickens)

“All these things, and a thousand like them, came to pass in and close upon the dear old year one thousand seven hundred and seventy-five. Environed by them, while the Woodman and the Farmer worked unheeded, those two of the large jaws, and those other two of the plain and the fair faces, trod with stir enough, and carried their divine rights with a high hand … With drooping heads and tremulous tails, they mashed their way through the thick mud, floundering and stumbling between whiles, as if they were falling to pieces at the larger joints.”

In this passage, there are three underlined objects: “them,” “with high hand,” and “through the thick mud.” The first one is an indirect object, while the second and third are objects of prepositions.