Lab Assignment 06 - A1-B1 Batch

Aim:

Designing an HBase Schema for a Shopping Platform

Objective:

To design and implement an HBase schema to store data for a shopping platform including user information, orders, and products. Perform CRUD operations on the data.

Problem Statement:

Create an HBase schema: Create an HBase schema with a table named 'shopping' consisting of column families for users, orders, and products.

Insert sample data: Insert sample data into the 'shopping' table to simulate users, orders, and products.

Perform CRUD operations:

- Create: Insert new user, order, and product data into the 'shopping' table.
- Read: Retrieve user information, order details, and product information from the 'shopping' table.
- Update: Update existing user, order, and product data in the 'shopping' table.
- Delete: Delete user, order, and product data from the 'shopping' table.

Theory:

- Explain HBase and its commands

Instructions:

- Open the HBase shell by running the `hbase shell` command.

- Complete the tasks listed above in the HBase shell.
- Document your commands, results, and observations in a text file.
- Submit your completed lab assignment document.

Sample Data:

Use the following sample data for your lab assignment:

- Users:
    - Name: John Doe
    - Email: john@example.com
    - Address: 123 Main St, City
- Orders:
    - Order Date: 2024-03-13
    - Total Price: $250
- Products:
    - Name: Laptop
    - Category: Electronics
    - Price: $1200

Submission:

Submit your lab assignment document containing the executed HBase commands, results, observations, and any additional notes.

Outcome:

This assignment will provide practical experience in not only designing an HBase schema but also performing basic CRUD operations on the data stored in HBase.

Lab Assignment 06 - A2-B2 Batch

Aim:

Designing an HBase Schema for a Library Management System

Objective:

To design and implement an HBase schema to store data for a library management system including information about books, authors, and library members. Perform CRUD operations on the data.

Problem Statement:

Create an HBase schema: Create an HBase schema with a table named 'library' consisting of column families for books, authors, and members.

Insert sample data: Insert sample data into the 'library' table to simulate books, authors, and library members.

Perform CRUD operations:

- Create: Insert new book, author, and member data into the 'library' table. ● Read: Retrieve book details, author information, and member details from the 'library' table.
- Update: Update existing book, author, and member data in the 'library' table.
- Delete: Delete book, author, and member data from the 'library' table.

Theory:

- Explain HBase and its commands

Instructions:

- Open the HBase shell by running the `hbase shell` command.

- Complete the tasks listed above in the HBase shell.
- Document your commands, results, and observations in a text file.
- Submit your completed lab assignment document.

Sample Data:

Use the following sample data for your lab assignment:

- Books:
    - Title: "To Kill a Mockingbird"
    - Author: Harper Lee
    - ISBN: 9780061120084
- Authors:
    - Name: Harper Lee
    - Birthdate: April 28, 1926
    - Nationality: American
- Library Members:
    - Name: John Smith
    - Member ID: 12345
    - Email: john@example.com

Submission:

Submit your lab assignment document containing the executed HBase commands, results, observations, and any additional notes.

Outcome:

This assignment will provide practical experience in not only designing an HBase schema but also performing basic CRUD operations on the data stored in HBase.

Lab Assignment 06 - Practice Assignment

Aim:

Designing an HBase Schema for a Social Media Platform.

Objective:

Design an HBase schema for a social media platform to store user profiles, posts, and comments. Perform CRUD operations on the data.

Problem Statement:

Create an HBase schema: Create an HBase schema with a table named 'social_media' consisting of column families for user profiles, posts, and comments.

Insert sample data: Insert sample data into the 'social_media' table to simulate user profiles, posts, and comments.

Perform CRUD operations:

- Create: Insert new user profiles, posts, and comments into the 'social_media' table.
- Read: Retrieve user profile details, post content, and comments from the 'social_media' table.
- Update: Update existing user profiles, post content, and comments in the 'social_media' table.
- Delete: Delete user profiles, posts, and comments from the 'social_media' table.

Theory:

- Explain HBase and its commands

Instructions:

- Open the HBase shell by running the `hbase shell` command.
- Complete the tasks listed above in the HBase shell.
- Document your commands, results, and observations in a text file.
- Submit your completed lab assignment document.

Sample Data:

Use the following sample data for your lab assignment:

- User Profiles:
    - Username: johndoe
    - Full Name: John Doe
    - Email: john@example.com
- Posts:
    - Content: "Hello world! This is my first post."
    - Timestamp: 2024-03-13 10:00:00
- Comments:
    - Content: "Nice post!"
    - Timestamp: 2024-03-13 10:05:00

Submission:

Submit your lab assignment document containing the executed HBase commands, results, observations, and any additional notes.

Outcome:

This assignment will provide practical experience in not only designing an HBase schema but also performing basic CRUD operations on the data stored in HBase.