Augalassia Cafe

Doa'a OSama

Contents of My project

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Introduction

→

Introduction

"I crafted a Java program that elegantly presents a cafe menu, leveraging a sophisticated data structure to streamline the billing system. This innovative code not only provides an intuitive interface for menu selection but also incorporates an efficient mechanism to manage customer transactions seamlessly."

Showing Code ->

Steps to create The Project

First

Identify and Analyze the problem

Second

Then Think of solutions to this problem

Third

Choose the most appropriate method that guarantees the least time and storage space

Next

Write the code the right way

Almost last

Build the project and ensure it is free of errors

Last

The Project is Done

What Is The Problem ?

"We, at Augalassia company, own numerous branches worldwide, and investors are now interested in acquiring a branch under our company's name. To maintain alignment with the core company system and prevent fraud, we have decided to construct a structure containing customer names and their associated passwords, ensuring secure access to our system. The current challenge lies in creating a swift and suitable structure for this task."

The Solve !

Array List	Provides constant-time access if you know the index.
	Not the most efficient if you need to search for a specific username, as you would need to iterate through the list.
Linked List	Beneficial when you frequently need to add or remove users, as it provides constant-time insertion and deletion.
	Slower than ArrayList for random access but can be faster for certain operations.
Map	Suitable when you want to associate each username with a unique password efficiently.
	HashMap or TreeMap can be used, depending on whether you need the keys sorted.

What Will We Choose ?

What do you think ?

Array List

I take a longer Time to find The Reqirement.
O(n)

Linked List

I will take Time More Then Array List to find The Requirement.
O(n)

Map

I will find The Requirement less than Previously.
O(1)


We will Use
HashMap

we create a map

```
private static Map<String, String> Users = new HashMap<>();
    Users.put("POsama", "pass041976");
    Users.put("PAhmad", "pass042009");
    Users.put("POmar", "pass122014");

    Users.put("PWafaa", "pass061982");
    Users.put("PDoa'a", "pass888");
    Users.put("PNura", "pass122006");
    Users.put("PAlia", "pass022013");
```

And we use it in method

```
if(isEmpty()){
        String enteredUsername = Useer.getText();
        String enteredPassword = String.valueOf(passs.getPassword());

        // Check if username or password is empty
        if (enteredUsername.isEmpty() || enteredPassword.isEmpty()) {
         JOptionPane.showMessageDialog(null, "Username or password cannot be empty!");
         } else {
         // Check if the entered credentials match the stored credentials
         if (Users.containsKey(enteredUsername) && Users.get(enteredUsername).equals(enteredPassword)) {
         // Open the main page (dashboard)
         dashboard dasho = new dashboard();
         dasho.setVisible(true);
         dasho.pack();
         this.dispose();
           } else {
             JOptionPane.showMessageDialog(null, "Incorrect username or password!");
                    }}}
```

And also we can use Array list in Items part, which we can store name's product and make operation in Array List

Question and answer

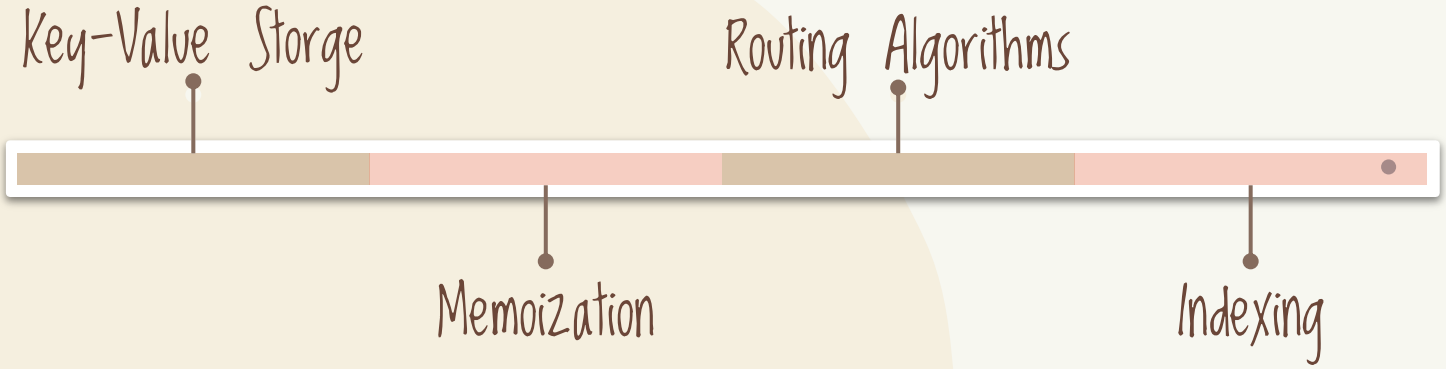
Question

What are the most prominent uses of map?

Answer

In many programming languages, the map data structure is implemented as HashMaps, TreeMaps, or similar structures, each with its own characteristics suitable for different use cases. The flexibility and efficiency of maps make them a fundamental tool in a programmer's toolkit.

The most prominent uses of maps



Thanks !

We will be happy to order from Augalassia.