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Computer Networks
(EE-353)

User Manual

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User Manual

Dynamic DNS Nexus

DNS

Management System

(Explorer & Manager Hub)

A Comprehensive DNS Management System (Dynamic DNS Nexus) in Java, seamlessly incorporating Data Structures & Algorithms, Object-Oriented Programming principles, and Database Management using MySQL. This system ensures streamlined and secure DNS operations, providing efficient management of domain name information and IP addresses.

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1. Introduction

1.1 Purpose

The DNS Nexus Management System is designed to efficiently manage DNS records, providing functionalities for adding, updating, deleting, and searching records. Built using Java Swing and MySQL, the application ensures a user-friendly experience.

1.2 System Requirements

Java Runtime Environment (JRE)

MySQL Database

Suitable hardware to run Java applications

2. Installation

2.1 Prerequisites

Ensure that you have Java installed and MySQL configured with the necessary database named 'dns_management_sys'.

2.2 Installation Steps

Download the application files.

Launch the MySQL Workbench and create a database named 'dns_management_sys'.

Run the DNS_Nexus_Management_System.java file.

3. Getting Started

3.1 Launching the Application

Execute the DNS_Nexus_Management_System.java file to launch the application.

3.2 Login

Enter valid credentials in the login window to access the main functionalities.

4. Main Window

4.1 Splash Window

The splash window provides an introductory interface upon application launch.

4.2 Main Functionalities

The main window encompasses various functionalities for managing DNS records, including CRUD operations, navigation, search, and filtering.

5. Managing DNS Records

5.1 Adding a DNS Record

Click on the "Add" button.

Enter the required information (InfoKey, Name, DNS Name, IP Class, IP Address).

Click "Save."

5.2 Updating a DNS Record

Select a record in the table.

Click on the "Update" button.

Modify the information.

Click "Save."

5.3 Deleting a DNS Record

Select a record in the table.

Click on the "Delete" button.

Confirm the deletion.

5.4 Viewing Records

Navigate through records using the "First," "Last," "Next," and "Previous" buttons.

6. Search and Filter

6.1 Searching by InfoKey, DNS Name, IP Address

Enter the search criteria.

Click "Search."

View the results.

6.2 Filtering Records in the JTable

Enter filter criteria.

Press "Filter."

7. Navigation

7.1 First, Last, Next, Previous Records

Use the respective buttons to navigate through records in the JTable.

8. Sign Out and Exit

8.1 Signing Out

Click on the "Sign Out" button to log out.

8.2 Exiting the Application

Use the "Exit" button to close the application gracefully.

9. Additional Features

9.1 About Section

Click on the "About" label to access information about the application and the developer.

10. Troubleshooting

10.1 Common Issues

Ensure a stable internet connection.

Verify MySQL connectivity.

10.2 Error Messages

Refer to error messages displayed in case of issues.

11. FAQs

Answer common user queries regarding the application.

12. Conclusion

In conclusion, the DNS Nexus Management System provides an intuitive platform for efficient DNS record management. Follow the user manual for seamless navigation and utilization of the application.