ONLINE SURVEY SYSTEM

A PROJECT REPORT

Submitted by

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in partial fulfillment of requirements for the award of the course

CGB1201 - JAVA PROGRAMMING

In

COMPUTER SCIENCE AND ENGINEERING

K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY

(An Autonomous Institution, affiliated to Anna University Chennai and Approved by AICTE, New Delhi)

SAMAYAPURAM – 621 112.

NOVEMBER- 2024

K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY (AUTONOMOUS)

SAMAYAPURAM – 621 112

BONAFIDE CERTIFICATE

Certified that this project report on **" ONLINE SURVEY SYSTEM "** is the bonafide work of **GANAGHASHREE.K (2303811710422043)** who carried outthe project work during the academic year 2024 - 2025 under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

DECLARATION

I declare that the project report on **"ONLINE SURVEY SYSTEM"** is theresult of original work done by us and best of our knowledge, similar work has notbeen submitted to **"ANNA UNIVERSITY CHENNAI"** for the requirement ofDegree of **BACHELOR OF ENGINEERING**. This project report is submitted onthe partial fulfilment of the requirement of the completion of the course **CGB1201 - JAVA PROGRAMMING.**

Signature

GANAGHASHREE.K

Place: Samayapuram

Date: 02.12.2024

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It is with great pride that I express our gratitude and in-debt to our institution "**K.Ramakrishnan College of Technology (Autonomous)**", for providing us with theopportunity to do this project.

I am glad to credit honourable chairman **Dr. K. RAMAKRISHNAN**, **B.E.,**for having provided for the facilities during the course of our study in college.

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I wish to express our special thanks to the officials and Lab Technicians of our departments who rendered their help during the period of the work progress.

VISION OF THE INSTITUTION

To serve the society by offering top-notch technical education on par with global standards.

MISSION OF THE INSTITUTION

- Be a center of excellence for technical education in emerging technologies byexceeding the needs of the industry and society.
- Be an institute with world class research facilities.
- Be an institute nurturing talent and enhancing the competency of students to transform them as all-round personality respecting moral and ethical values.

VISION OF DEPARTMENT

To be a center of eminence in creating competent software professionals with research and innovative skills.

MISSION OF DEPARTMENT

M1: Industry Specific: To nurture students in working with various hardware and software platforms inclined with the best practices of industry.

M2: Research: To prepare students for research-oriented activities.

M3: Society: To empower students with the required skills to solve complex technological problems of society.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1: Domain Knowledge

To produce graduates who have a strong foundation of knowledge and skills in the field of Computer Science and Engineering.

PEO 2: Employability Skills and Research

To produce graduates who are employable in industries/public sector/research organizations or work as an entrepreneur.

PEO 3: Ethics and Values

To develop leadership skills and ethically collaborate with society to tackle real-world challenges.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1: Domain Knowledge

To analyze, design and develop computing solutions by applying foundational concepts of Computer Science and Engineering.

PSO 2: Quality Software

To apply software engineering principles and practices for developing quality software for scientific and business applications.

PSO 3: Innovation Ideas

To adapt to emerging Information and Communication Technologies (ICT) to innovate ideas and solutions to existing/novel problems.

PROGRAM OUTCOMES (POs)

Engineering students will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations

6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

ABSTRACT

The Online Survey System is designed to facilitate seamless survey creation, distribution, and response collection for organizations. This system supports both administrators and participants, offering a streamlined process for managing surveys and gathering feedback. Administrators can log in to create, edit, and clear surveys, as well as view detailed response summaries. Participants, authenticated through a simple login process, can access surveys, provide responses, and track their progress.Key features include role-based authentication, a user-friendly interface for both survey management and participation, and automated tracking of user responses. The system ensures organized data collection, real-time response processing, and enhanced engagement through an intuitive workflow. By supporting functionalities like Yes/No response summarization and detailed feedback views, it empowers organizations to analyze feedback effectively. Future enhancements could include advanced reporting tools, integration with data visualization platforms, mobile accessibility, and email or SMS-based survey invitations, further enriching its utility and user experience.

ABSTRACT WITH POs AND PSOs MAPPING

CO 5 : BUILD JAVA APPLICATIONS FOR SOLVING REAL-TIME PROBLEMS.

ABSTRACT	POs MAPPED	PSOs MAPPED
The Online Survey System simplifies survey creation, distribution, and response collection for organizations. Administrators can manage surveys and view responses, while participants log in to complete them. Features include role-based authentication, real-time response tracking, and Yes/No summarization for effective feedback analysis. Future enhancements may add advanced reporting, mobile access, and automated notifications.	**PO1 -3** **PO2 -3** **PO3 -3** **PO5 -3** **PO6 -3** **PO8 -3** **PO9 -3** **PO10 -3** **PO11-3** **PO12 -3**	**PSO1 -3** **PSO2 -3** **PSO3 -3**

Note: 1- Low, 2-Medium, 3- High

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Objective

The objective of the Online Survey System is to streamline the process of survey creation, distribution, and response collection for organizations. It aims to provide a user-friendly platform for administrators to design and manage surveys while enabling participants to easily complete and track their responses. The system focuses on ensuring real-time response tracking and efficient feedback analysis.Another key objective is to enhance data organization through features like role- based authentication and response summarization. It also aims to improve engagement and collaboration between admins and users. It allows users to design surveys with customizable templates and a variety of question types while ensuring accessibility across devices like desktops, tablets, and smartphones. The system streamlines data collection and analysis, automating processes to save time and reduce errors. It aims to offer real-time insights, enhance user engagement, and support large-scale data management, making it ideal for academic, business, or research purposes.

1.2 Overview

The Online Survey System is a comprehensive platform designed to simplify the process of creating, distributing, and managing surveys for organizations. It allows administrators to design surveys, monitor real-time responses, and generate detailed reports to analyze feedback efficiently. Participants can log in, complete surveys, and track their progress throughout the process. The system provides role-based authentication, ensuring secure access for both administrators and participants.With a user-friendly interface, it streamlines survey participation and management. The system includes features like real-time response tracking and feedback summarization, particularly for Yes/No questions, to simplify data analysis. It helps organizations gather organized and actionable insights, improving decision-making.

1.3 Java Programming Concepts

- **Object-Oriented Programming (OOP):** The system is designed using OOP principles, such as classes, objects, inheritance, and polymorphism. For instance, the main class (OnlineSurveySystem) contains methods and properties to manage the survey workflow, while each component (e.g., login, survey, admin panel) can be considered as a separate class or set of functions within the main system.
- **GUI (Graphical User Interface):** The system utilizes AWT (Abstract Window Toolkit) for creating the graphical user interface, including components like TextField, Button, Label, TextArea, and Dialog to provide a visual interface for user interactions.
- **Event Handling:** The system uses Event Handling mechanisms, such as implementing the ActionListener interface and using the actionPerformed method to handle user actions like button clicks, ensuring proper functionality of buttons for login, submission, and navigation.
- **Data Structures:** The system uses ArrayList to store survey questions and HashMap to store responses from participants, with the user's name as the key and their responses as the value. This allows for efficient managementand retrieval of data.
- **Exception Handling:** The system handles invalid or missing inputs using conditionals, ensuring that proper messages are shown to the user for errors like empty responses or incorrect login credentials.
- **Error Handling:** In the Online Survey System, error handling is introduced to ensure smooth user interactions and prevent the system from crashing dueto unexpected inputs or issues.

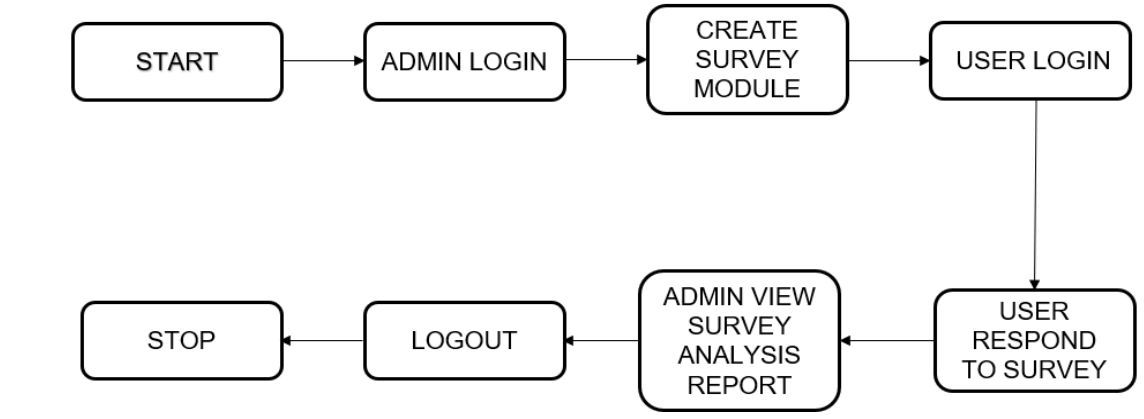
CHAPTER 2

PROJECT METHODOLOGY

2.1 Proposed Work

The proposed work for the Online Survey System includes enhancing error handling, input validation, and role-based access for better user interaction. It aims to add support for various survey question types, such as multiple-choice and rating scales, while improving the admin panel with features like editing or deleting questions. Additionally, real-time response analytics will be integrated for better insights, and future updates will focus on mobile compatibility and notifications to increase accessibility and user engagement. These will create a more efficient and user-friendly survey experience. These improvements will enhance the overall survey experience, making it more interactive and efficient for both users andadmins. Finally, reporting tools and data export options will be integrated to facilitate better analysis of survey data.

2.2 Block Diagram



CHAPTER 3

MODULE DESCRIPTION

3.1 ADMIN LOGIN MODULE

The Login Module serves as the gateway to the Online Survey System, allowing both administrators and users to access the system based on their roles. Administrators can log in using their credentials to manage survey creation, view responses, and analyze survey results, while users log in to participate in surveys. This module validates the entered username and password, ensuring secure access. Upon successful login, administrators are redirected to the Admin Panel, while users are directed to the Survey Form.

3.2 CREATE SURVEY MODULE

The Create Survey Module in the Admin Panel is designed to empower administrators to efficiently create and manage surveys within the system. This module allows administrators to add survey questions, define question types, and edit or remove questions as needed. Administrators can build surveys tailored to their objectives, ensuring clarity and relevance for participants. The interface is user-friendly, providing text fields for inputting questions and buttons to save or clear survey content. Once the survey is created, it is made available to participants for responses. This module also includes features to review, reset, or update surveys, ensuring flexibility and seamless operation for the admin.

3.3 USER LOGIN

The User Login Module enables participants to securely access the Online Survey System using their credentials. Upon successful authentication, users can view and respond to available surveys assigned to them. The login interface is simple and user-friendly, requiring a valid username and password to proceed. This module ensures the privacy of user data while providing personalized access to surveys and response tracking. In case of invalid credentials, appropriate error messages guide users for correction. The User Login Module serves as the gateway to participation, ensuring that only authorized users engage with the surveys while maintaining a secure and organized workflow.

3.4 USER RESPOND TO SURVEY

The User Respond to Survey Module allows participants to answer survey questions in an intuitive and streamlined manner. Users are presented with one question at a time, ensuring focus and clarity while responding. After submitting each answer, the system automatically progresses to the next question until the survey is complete. Responses are securely recorded and linked to the user's profile for further analysis. Upon completing the survey, users receive a confirmation message, ensuring their participation is acknowledged.

3.5 ADMIN VIEW SURVEY ANALYSIS MODULE

The Admin View Survey Analysis Report module enables administrators to review and analyze survey responses effectively. It provides a summarized view of user feedback, including response counts, percentages for Yes/No questions, and detailed individual answers. This module helps identify trends and patterns, offering valuable insights for decision-making. With organized and visualized data, administrators can make informed improvements based on user feedback.

3.6 LOGOUT MODULE

The Logout Module ensures secure termination of user sessions in the system. Both administrators and participants can easily log out after completing their tasks, preventing unauthorized access to their accounts. For users, logging out redirects them to the login screen, maintaining the integrity of their data. This moduleenhances security by ensuring that sessions are properly closed, especially in sharedor public environments. It is a critical feature for safeguarding sensitive survey and information.

CHAPTER 4

CONCLUSION AND FUTURE SCOPE

4.1 CONCLUSION

The Online Survey System significantly enhances the survey process by providing a structured and centralized platform for both administrators and participants. Administrators can easily create and manage surveys, monitor responses, and gain valuable insights through detailed reports. The user login ensures secure access for participants, and their responses are stored efficiently, making data analysis simpler and more accurate. Furthermore, the system's automated features, such as response tracking and real-time updates, reduce manual efforts and improve efficiency. By allowing quick survey creation and offering comprehensive analysis tools, this system empowers organizations to gather relevant feedback for informed decision- making, ultimately leading to better products, services, and customer satisfaction.

4.2 FUTURE SCOPE

The future scope of the Online Survey System includes several enhancements that can improve its functionality and user experience. One major addition could be the integration of advanced data analytics tools, allowing administrators to generate more detailed reports and visual representations of survey results. Additionally, incorporating machine learning algorithms could help analyze trends and patterns in responses, offering predictive insights. Mobile compatibility is another key area for expansion, enabling users to participate in surveys seamlessly from smartphones and tablets. Integration with social media platforms and email systems for survey distribution and automated reminders could increase survey reach and response rates. Finally, supporting multilingual capabilities could help extend the system's use to global audiences, making it even more versatile for international organizations. In addition to the aforementioned enhancements, the future scope of the Online Survey System could involve real-time analytics, allowing users and administrators to see responses and results as they are submitted. Implementing user feedback mechanisms within the system itself can ensure continuous improvements based on actual user experience. Another potential expansion is the ability to create dynamic and customizable surveys, allowing administrators to add various question types such as rating scales, image-based questions, and conditional questions that adapt based on previous answers

Additionally, integrating third-party APIs to improve survey distribution via messaging platforms, like WhatsApp or SMS, could widen the system's reach. The system could also incorporate more robust security features, such as end-to-end encryption and multi-factor authentication, to ensure that survey data is kept safe and confidential. By embracing these innovations, the Online Survey System could become an even more powerful tool for data collection, analysis, and decision- making across various sectors.

APPENDIX A

```
import java.awt.*; import
java.awt.event.*;
import java.util.ArrayList;
import java.util.HashMap;

public class OnlineSurveySystem extends Frame implements ActionListener {
    // Components  for Login TextField
    tfUsername, tfPassword;Button
    btnLogin;

    // Components for Survey Form (User Side)
    TextField tfResponse;
    Button btnSubmit, btnLogout;

    // Components for Admin Panel
    TextField tfQuestion;
    Button btnAddQuestion, btnClearQuestions, btnViewResponses,
btnLogoutAdmin;

    // Storage for Survey Questions and Responses
    ArrayList<String> questions = new ArrayList<>();
    HashMap<String, HashMap<String, String>> responses = new HashMap<>();String
    currentUser;
    int currentQuestionIndex = 0;

    // Constructor
    public OnlineSurveySystem() {
        setupLoginScreen(); setSize(300,
        200); setTitle("Login Screen");
        setVisible(true);

        // Close window action addWindowListener(new
        WindowAdapter() {
            public void windowClosing(WindowEvent we) {
                System.exit(0);
            }
        });
    }

    private void setupLoginScreen() {
```

```
        removeAll();
        setLayout(new FlowLayout());

        Label lblUsername = new Label("Username:");
        tfUsername = new TextField(20);

        Label lblPassword = new Label("Password:");
        tfPassword = new TextField(20);
        tfPassword.setEchoChar('*');

        btnLogin = new Button("Login");
        btnLogin.addActionListener(this);

        add(lblUsername);
        add(tfUsername);
        add(lblPassword);
        add(tfPassword);
        add(btnLogin);


        setVisible(true);
    }

    @Override
    public void actionPerformed(ActionEvent e) {if
        (e.getSource() == btnLogin) {
            String username = tfUsername.getText();String
            password = tfPassword.getText();

            if (username.equals("SHREE") && password.equals("123")) {
                openAdminPanel();
            } else if ((username.equals("HARSHINI") || username.equals("HARINI") ||
                    username.equals("HARIPRIYA") || username.equals("DHIVYA")) &&
password.equals("123")) {
                currentUser = username;
                openSurveyForm();
            } else {
                showMessage("Invalid Login! Try again.");
            }
        } else if (e.getSource() == btnSubmit) { String
            response = tfResponse.getText();

            if (response.isEmpty()) { showMessage("Please
                provide a response.");return;
            }
```

```
        // Save response for the current user and question responses.computeIfAbsent(currentUser, k
        -> new HashMap<>())
                .put(questions.get(currentQuestionIndex), response);

        currentQuestionIndex++;
        if (currentQuestionIndex < questions.size()) {
            showSurveyQuestion();
        } else {
            showMessage("Thank you for completing the survey!");
            resetSurvey();
            setupLoginScreen(); // Go back to login screen after submission
        }
    } else if (e.getSource() == btnLogout) {
        resetSurvey();
        setupLoginScreen(); // Go back to login screen
    } else if (e.getSource() == btnAddQuestion) {String
        question = tfQuestion.getText();
        if (!question.isEmpty()) { questions.add(question);
            showMessage("Question added successfully!");
            tfQuestion.setText(""); // Clear input
        } else {
            showMessage("Question field cannot be empty.");
        }
    } else if (e.getSource() == btnClearQuestions) {
        questions.clear();
        showMessage("All questions have been cleared.");
    } else if (e.getSource() == btnViewResponses) {
        showResponses();
    } else if (e.getSource() == btnLogoutAdmin) {
        setupLoginScreen(); // Go back to login screen
    }
}

private void openSurveyForm() {if
    (questions.isEmpty()) {
        showMessage("No survey available at the moment. Please try again later.");return;
    }

    currentQuestionIndex = 0;
    showSurveyQuestion();
}
```

```
private void showSurveyQuestion() {
    removeAll();
    setLayout(new FlowLayout());

    Label lblQuestion = new Label(questions.get(currentQuestionIndex));tfResponse
    = new TextField(30);
    btnSubmit = new Button("Submit");
    btnSubmit.addActionListener(this);

    add(lblQuestion);
    add(tfResponse);
    add(btnSubmit);

    btnLogout = new Button("Logout");
    btnLogout.addActionListener(this); add(btnLogout);


    setSize(400, 250);
    setTitle("Survey Form");
    setVisible(true);
}


private void openAdminPanel() {
    removeAll();
    setLayout(new FlowLayout());

    Label lblQuestion = new Label("Add Survey Questions:");
    tfQuestion = new TextField(30);

    btnAddQuestion = new Button("Add Question");
    btnAddQuestion.addActionListener(this);

    btnClearQuestions = new Button("Clear Survey");
    btnClearQuestions.addActionListener(this);

    btnViewResponses = new Button("View Responses");
    btnViewResponses.addActionListener(this);

    btnLogoutAdmin = new Button("Logout");
    btnLogoutAdmin.addActionListener(this);

    add(lblQuestion);
    add(tfQuestion);
    add(btnAddQuestion);
    add(btnClearQuestions);
```

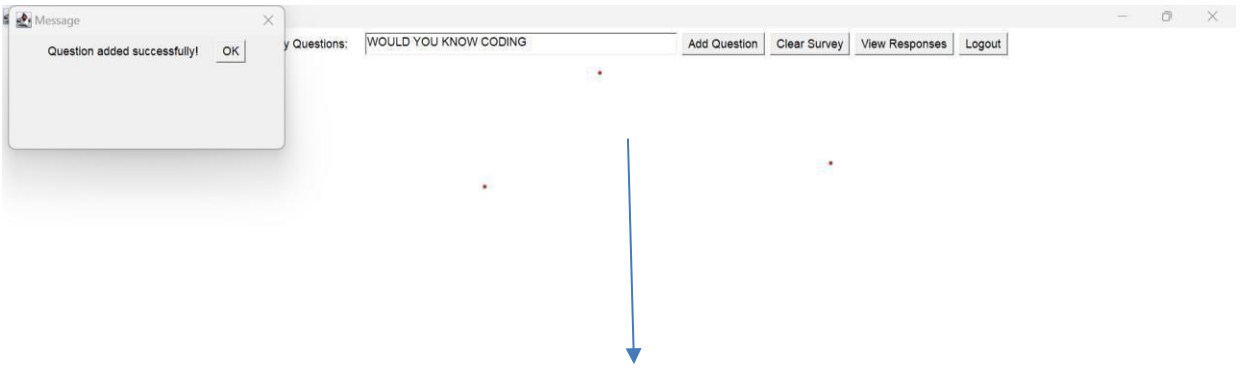
```
    add(btnViewResponses);
    add(btnLogoutAdmin);

    setSize(500, 300);
    setTitle("Admin Panel");
    setVisible(true);
}

private void showResponses() {
    removeAll();
    setLayout(new FlowLayout());

    if (responses.isEmpty()) { showMessage("No
        responses available.");return;
    }

    Label lblResponses = new Label("Survey Responses:");TextArea
    taResponses = new TextArea(15, 50);

    for (String question : questions) { int
        yesCount = 0, noCount = 0; boolean
        isYesNoQuestion = false;

        taResponses.append("Question: " + question + "\n");for

        (String respondent : responses.keySet()) {
            HashMap<String, String> userResponse = responses.get(respondent);String
            answer = userResponse.get(question);

            // Count Yes/No for Yes/No questionsif
            ("Yes".equalsIgnoreCase(answer)) {
                yesCount++;
                isYesNoQuestion = true;
            } else if ("No".equalsIgnoreCase(answer)) {
                noCount++;
                isYesNoQuestion = true;
            }

            // Append respondent name and their responseif
            (answer != null) {
                taResponses.append("  " + respondent + ": " + answer + "\n");
            }
        }
```

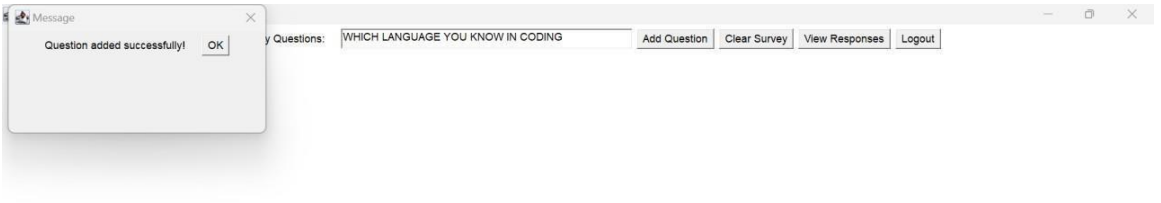
```
            // Show counts for Yes/No questionsif
            (isYesNoQuestion) {
                taResponses.append("Summary: Yes = " + yesCount + ", No = " +noCount +
"\n");

            }

            taResponses.append("\n");
        }

        add(lblResponses);
        add(taResponses);

        Button btnBack = new Button("Back");
        btnBack.addActionListener(ae -> openAdminPanel());
        add(btnBack);

        setSize(600, 500); setTitle("Survey
        Responses");setVisible(true);
    }

    private void resetSurvey() {
        currentQuestionIndex = 0;
    }

    private void showMessage(String message) {
        Dialog dialog = new Dialog(this, "Message", true);
        dialog.setLayout(new FlowLayout());
        Label lblMessage = new Label(message);Button
        btnOk = new Button("OK");
        btnOk.addActionListener(ae -> dialog.setVisible(false));
        dialog.add(lblMessage);
        dialog.add(btnOk);
        dialog.setSize(300, 150);
        dialog.setVisible(true);
    }

    public static void main(String[] args) {new
        OnlineSurveySystem();
}
}
```

APPENDIX B

ADMIN LOGIN

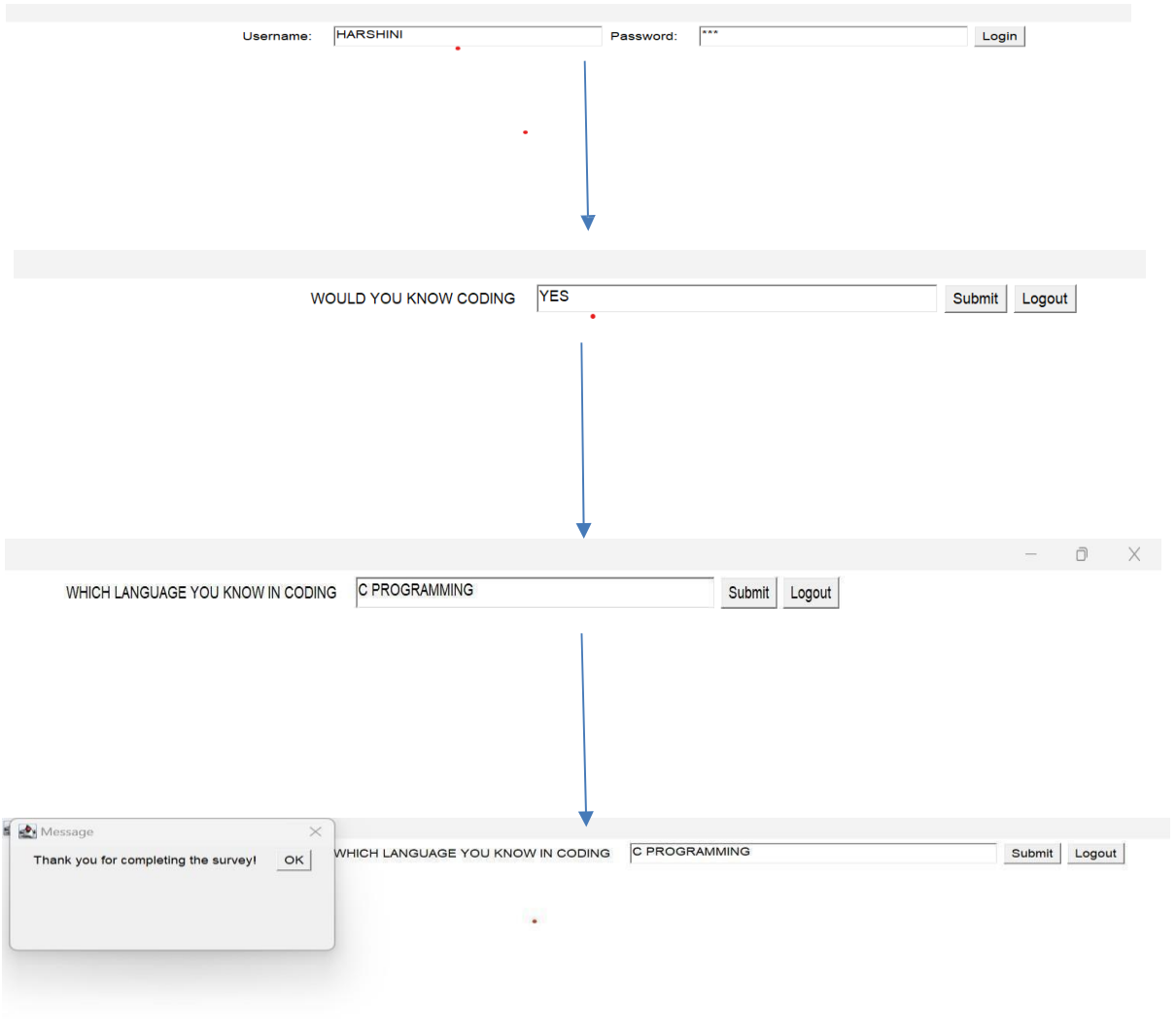
CREATE SURVEY MODULE



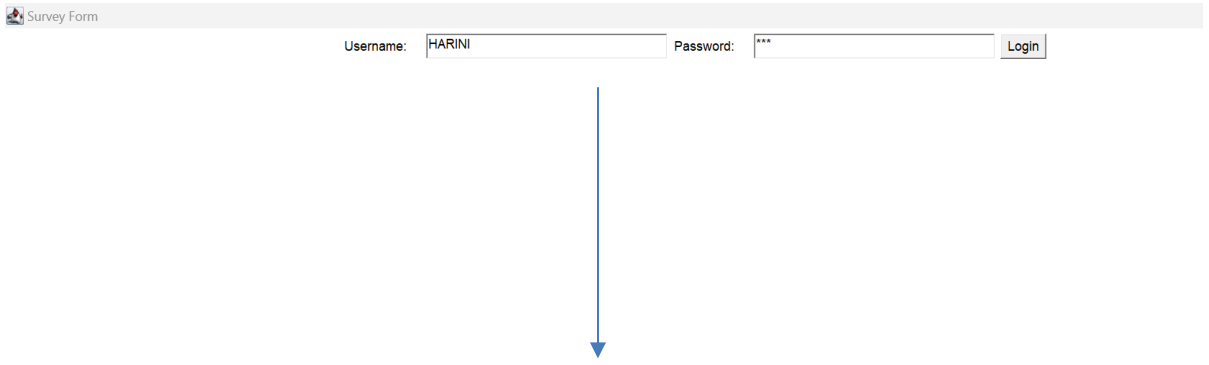


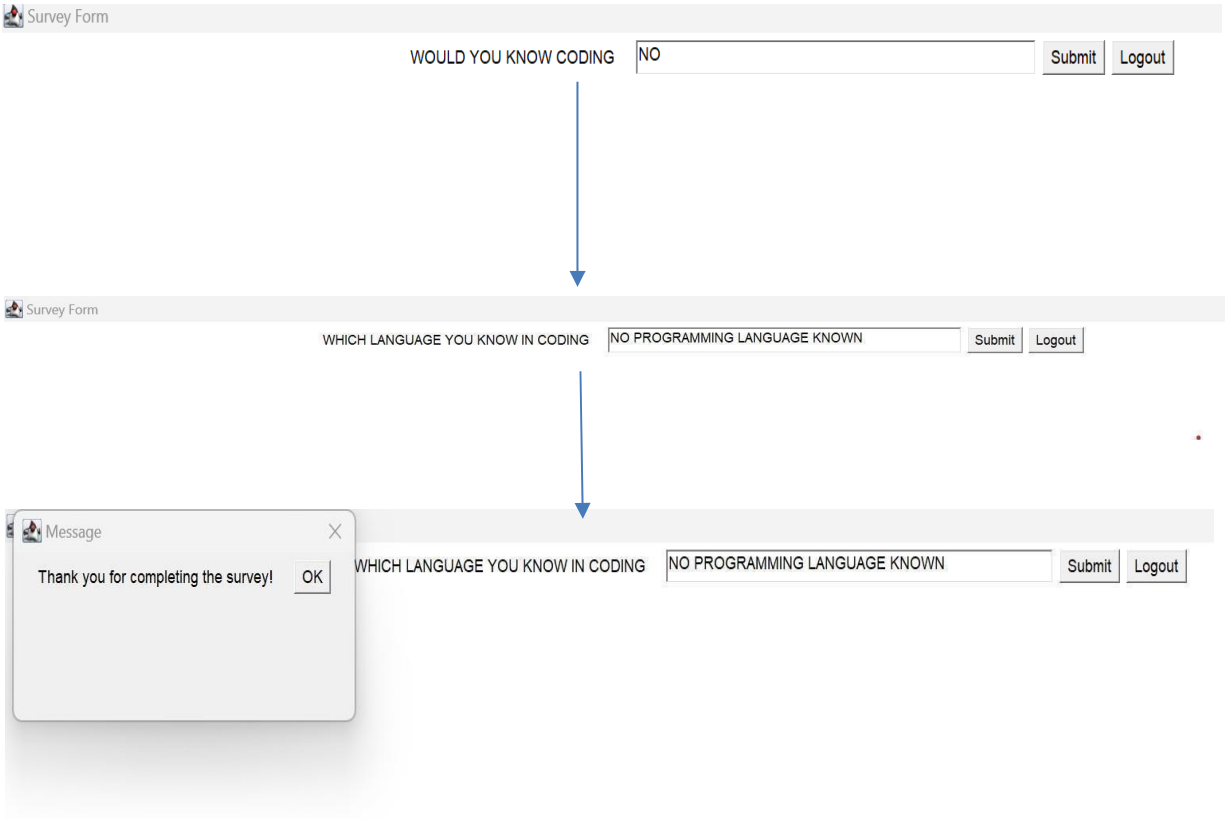
USER LOGIN AND RESPOND TO SURVEY

USER 1



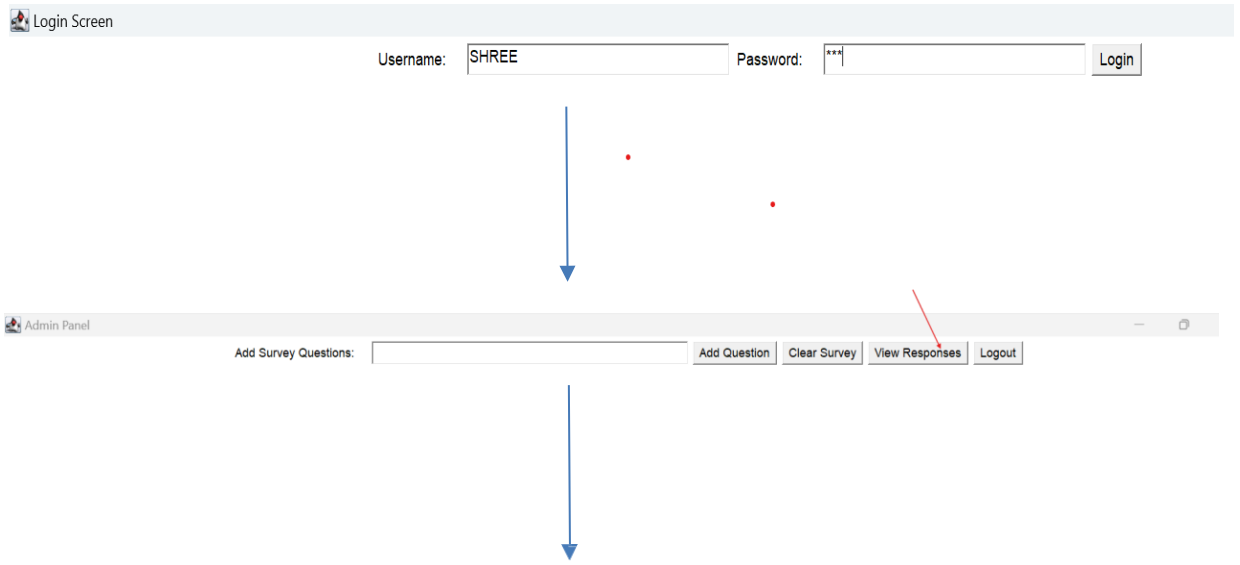
USER 2



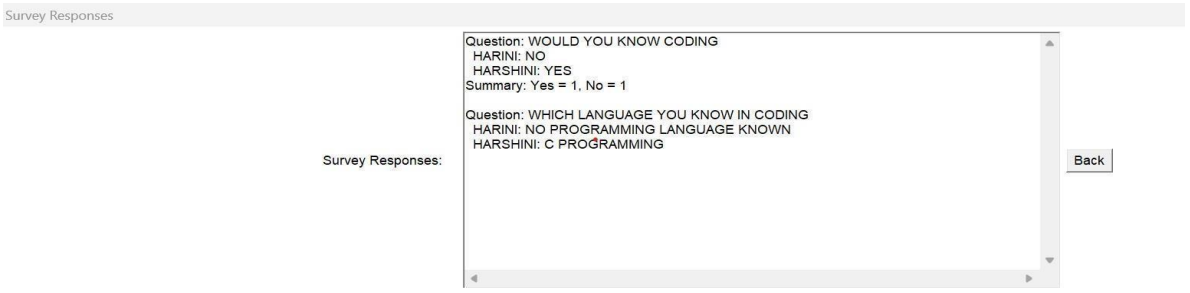


ADMIN VIEW SURVEY ANALYSIS REPORT

ADMIN LOGIN



ADMIN VIEW THE ANALYSIS



LOGOUT

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YOUTUBE LINK

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