ONLINE OUTPASS SYSTEM

MINOR PROJECT REPORT

By

K. B. YASWANTH(RA2211003011104)
S. TEJASWI (RA2211003011107)
T.SANSKAR(RA2211003011130)

Under the guidance of

DR.B.KANISHA

In partial fulfilment for the Course

of

21CSC203P – ADVANCED PROGRAMMING PRACTICE

in **DEPARTMENT OF COMPUTING TECHNOLOGIES**

FACULTY OF ENGINEERING AND TECHNOLOGY

SCHOOL OF COMPUTING

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

KATTANKULATHUR

NOVEMBER 2023

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Under Section 3 of UGC Act, 1956)

BONAFIDE CERTIFICATE

Certified that this minor project report for the course **21CSC203P ADVANCED PROGRAMMING PRACTICE** entitled in "**ONLINE OUTPASS SYSTEM**" is the Bonafide work of K.B.YASWANTH**(RA2211003011104) AND S.TEJASWI (RA2211003011107)** , **T.SANSKAR (RA2211003011130)** who carried out the work under my supervision.

SIGNATURE

DR.B.KANISHA
ASSOCIATE PROFESSOR
DEPARTEMENT OF COMPUTING TECHNOLOGIES
SRM Institute of Science and Technology
Kattankulathur

ABSTRACT

The Online Outpass System represents a modern solution to the process of granting permissions for individuals to temporarily leave controlled environments. This system aims to replace traditional paper-based Outpass request procedures with an efficient, secure, and user-friendly online platform. Users can submit Outpass requests through a web interface, specifying details such as the reason for leaving, date, and time, while authorized personnel can review and approve these requests electronically. Real-time notifications keep users informed of their request's status, and a robust tracking and reporting system ensures accountability and transparency. The Online Outpass System improves efficiency, security, and convenience, making it an essential tool for educational institutions, corporate organizations, correctional facilities, and other controlled environments

ACKNOWLEDGEMENT

We express our heartfelt thanks to our honorable **Vice Chancellor Dr. C. MUTHAMIZHCHELVAN**, for being the beacon in all our endeavors.

We would like to express my warmth of gratitude to our **Registrar Dr. S. Ponnusamy,** for his encouragement.

We express our profound gratitude to our **Dean (College of Engineering and Technology) Dr. T. V.Gopal,** for bringing out novelty in all executions.

We would like to express my heartfelt thanks to Chairperson, School of Computing **Dr. Revathi Venkataraman,** for imparting confidence to complete my course project

We wish to express my sincere thanks to **Course Audit Professors Dr. Vadivu. G , Professor, Department of Data Science and Business Systems and Dr. Sasikala. E Professor, Department of Data Science and Business Systems** and **Course Coordinators** for their constant encouragement and support.

We are highly thankful to our my Course project Faculty **Dr.B Kanisha , Associate professor , C.Tech Department** for her assistance, timely suggestion and guidance throughout the duration of this course project.

We extend my gratitude to our **HoD Dr.M.Pushpalatha ,Professor &Head , C.Tech** and my Departmental colleagues for their Support.

Finally, we thank our parents and friends near and dear ones who directly and indirectly contributed to the successful completion of our project. Above all, I thank the almighty for showering his blessings on me to compl

TABLE OF CONTENTS

1. INTRODUCTION

1.1 MOTIVATION

Efficiency and Time Savings: One of the primary motivations for implementing an Online Outpass System is to streamline and expedite the outpass application and approval process. Traditional, paper-based systems can be time-consuming and often result in delays. By going digital, institutions can save time for both applicants and approving authorities.

Reduced Administrative Burden: Paper-based outpass systems typically involve a substantial amount of manual record-keeping and paperwork. This places a significant administrative burden on staff. An online system can significantly reduce administrative workload by automating many of these tasks.

Enhanced Security: Traditional systems can be vulnerable to errors, forgeries, or misuse. An online system can enhance security through user authentication, real-time tracking, and approval workflows, ensuring that outpasses are granted to eligible individuals for legitimate reasons.

Real-time Monitoring and Accountability: Online systems can provide real-time tracking and monitoring of individuals with active outpasses. This promotes accountability and security by allowing authorities to know the whereabouts of individuals at any given time.

Data-Driven Insights: An Online Outpass System can generate valuable data and insights into outpass usage patterns. This data can be used for informed decision-making, security improvements, and policy adjustments.

1.2 OBJECTIVE

An online outpass system is a digital solution designed to simplify and modernize the process of requesting, approving, and monitoring departures from controlled premises. By transitioning from traditional paper-based methods to a user-friendly digital platform, it enhances efficiency, reduces administrative burdens, and accelerates processing times. This system also provides real-time tracking capabilities, reinforcing security measures and facilitating better control over individuals' movements, a vital aspect in educational institutions and workplaces. Moreover, it offers digital record-keeping, enabling easy access to historical data for compliance, auditing, and reference purposes.

1.3 PROBLEM STATEMENT

The online outpass system is plagued by several problems, hindering its effectiveness and user satisfaction. One of the major issues is frequent technical glitches and server downtimes, causing frustration among users trying to apply for outpasses. Additionally, the system's verification process often results in delays and errors, leading to misunderstandings and inconvenience for both students and administrators. Furthermore, the lack of real-time updates and notifications makes it difficult for applicants to track the status of their outpass requests, creating uncertainty and anxiety. Addressing these problems is crucial to streamline the online outpass system and provide a smoother experience for all stakeholders

1.4 CHALLENGES

The online outpass system faces several challenges. First, ensuring the security of sensitive student information and maintaining data privacy remains a constant concern. Second, designing an intuitive user interface that accommodates the diverse needs of students, staff, and administrators can be a daunting task. Furthermore, integrating real-time updates and notifications to improve transparency and convenience can be technically complex. Lastly, overcoming resistance to change and ensuring the adoption of the system by all stakeholders can be a significant challenge in educational institutions. Successfully addressing these challenges is essential to establish a robust and efficient online outpass system.

2. LITERATURE SURVEY

A literature survey for an online outpass system would involve researching existing literature and related works in the field of online outpass systems, digital leave management, and related areas. Here are some key topics, keywords, and sources you can explore to conduct your literature survey:

1. Introduction:

• Overview of the concept of an online out pass system.

• Explanation of the need for such a system in educational institutions or organizations

• Discussion of the benefits and challenges associated with implementing an online out pass system.

2. Existing Systems and Solutions:

• Review of any existing online out pass systems or similar solutions

• Analysis of their features, functionalities, and limitations.

• Identification of gaps or areas for improvement in the existing systems.

3. Design and Architecture:

• Examination of the design principles and architectural components of an online outpass system.

• Discussion of the system requirements and considerations for ensuring security, scalability, and user-friendliness.

• Evaluation of different design choices and their impact on system performance and usability.

4. Implementation and Deployment:

• Description of the development process and technologies used in building the online Outpass system.

• Discussion of the challenges encountered during implementation and the strategies employed to overcome them.

• Presentation of any case studies or real-world deployments of the system.

3.REQUIREMENT ANALYSIS

Requirement analysis is an essential step in defining the scope and functionality of an online outpass system. Here is a suggested list of requirements to consider:

User Roles:
Identify the different user roles involved in the system, such as students, parents/guardians, faculty members, and administrative staff.

User Registration and Authentication:
Implement a user registration process that collects necessary information and verifies user identity. Ensure secure authentication mechanisms, such as username/password or two-factor authentication

Outpass Request Submission:
Allow students to submit outpass requests online. Include fields for the purpose of the outpass, date and time of departure, date and time of return, and any additional required information

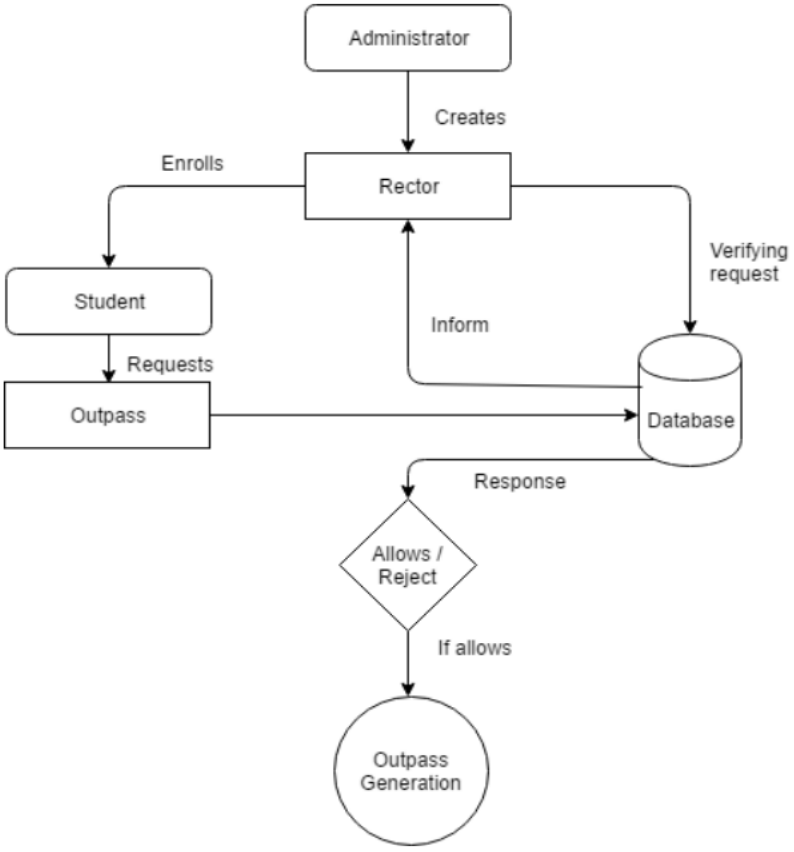
Approval Workflow:
Define an approval workflow for outpass requests. Determine the appropriate authorities who can approve or reject outpass requests, such as faculty members or administrative staff. Implement a notification mechanism to inform students about the status of their requests.

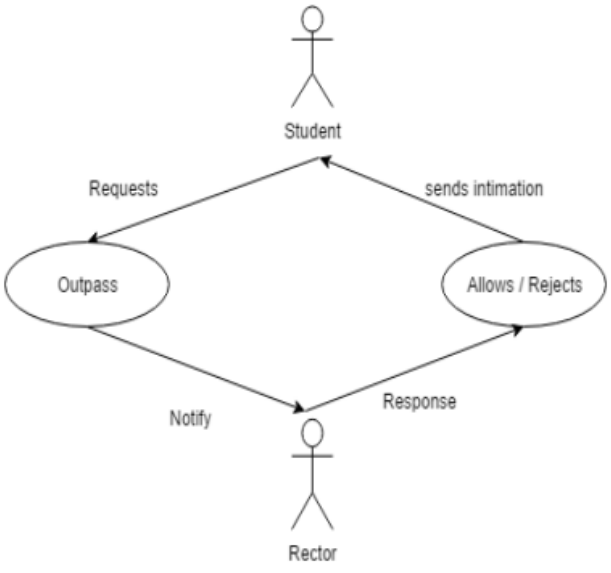
Tracking and Monitoring:
Provide a dashboard or interface for administrative staff to track and monitor outpass requests. This feature should allow staff members to view pending, approved, and rejected requests, as well as generate reports if necessary.

Communication:
Include a messaging system to facilitate communication between students, parents, and administrative staff regarding outpass requests. Ensure that messages are secure and accessible within the system.

Leave History:
Maintain a record of all outpass requests for future reference. This history can be useful for tracking attendance, identifying patterns, and generating reports.

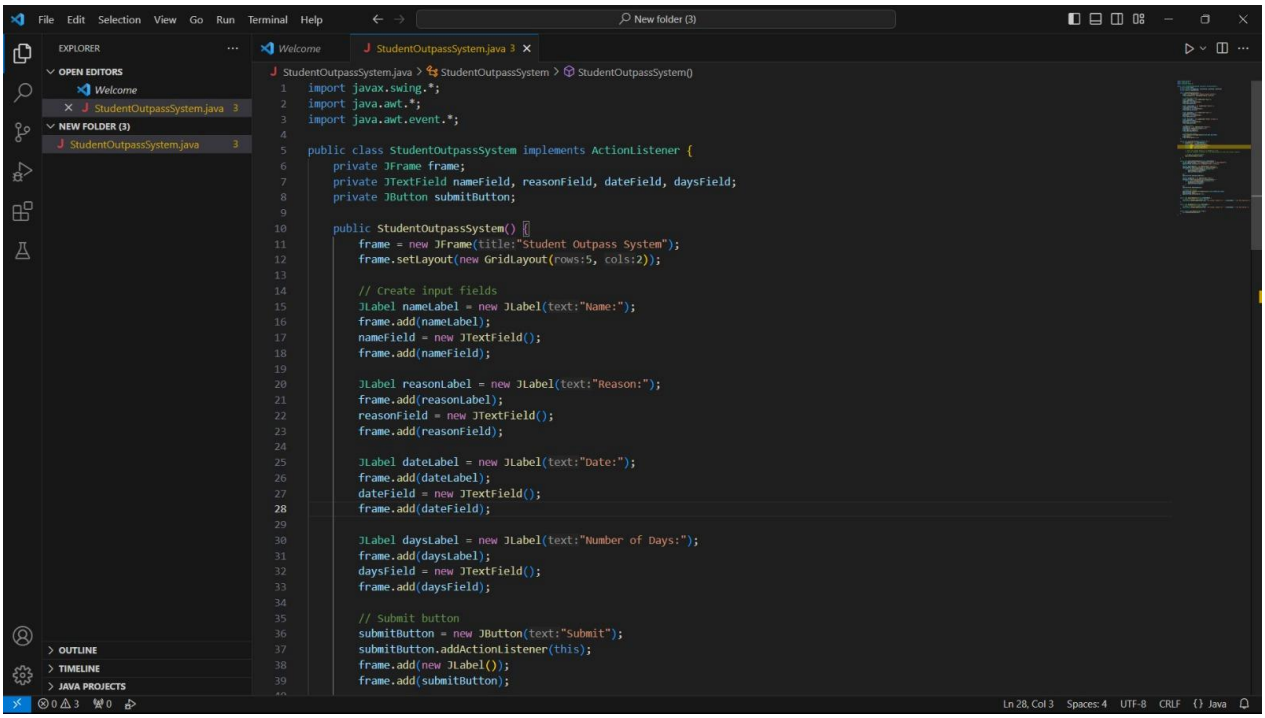
4. ARCHITECTURE AND DESIGN



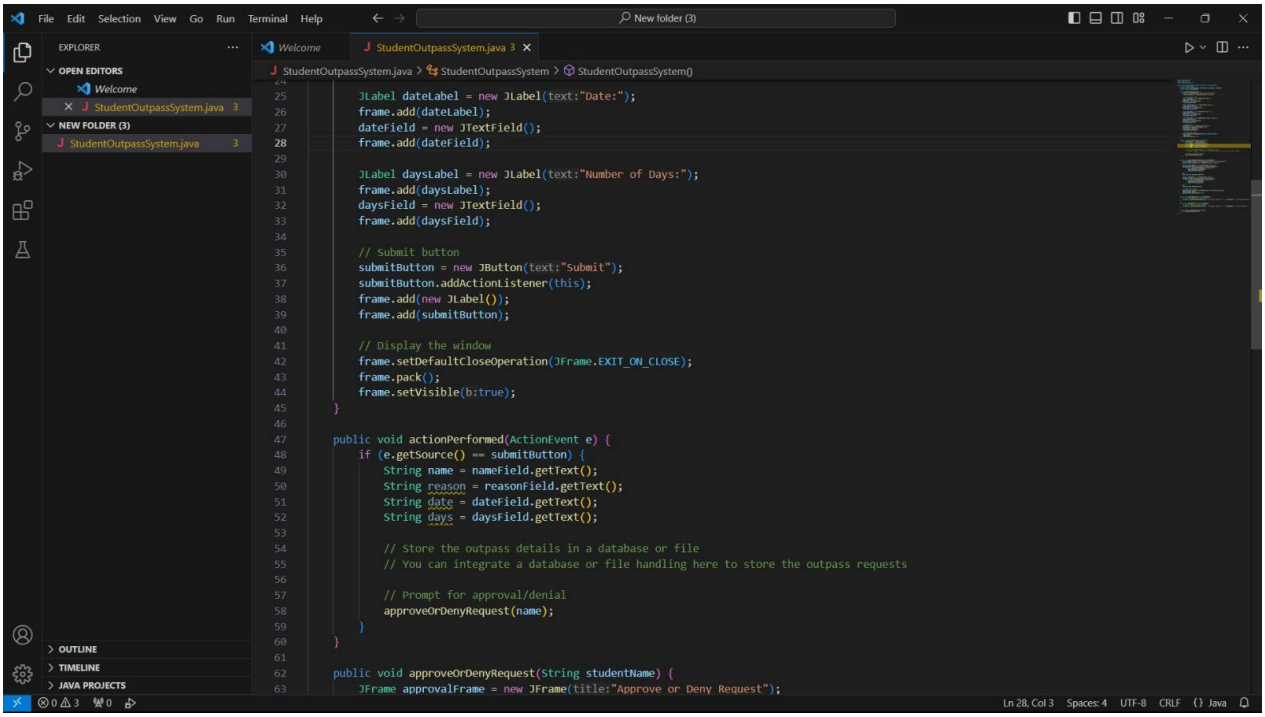


5. IMPLEMENTATION

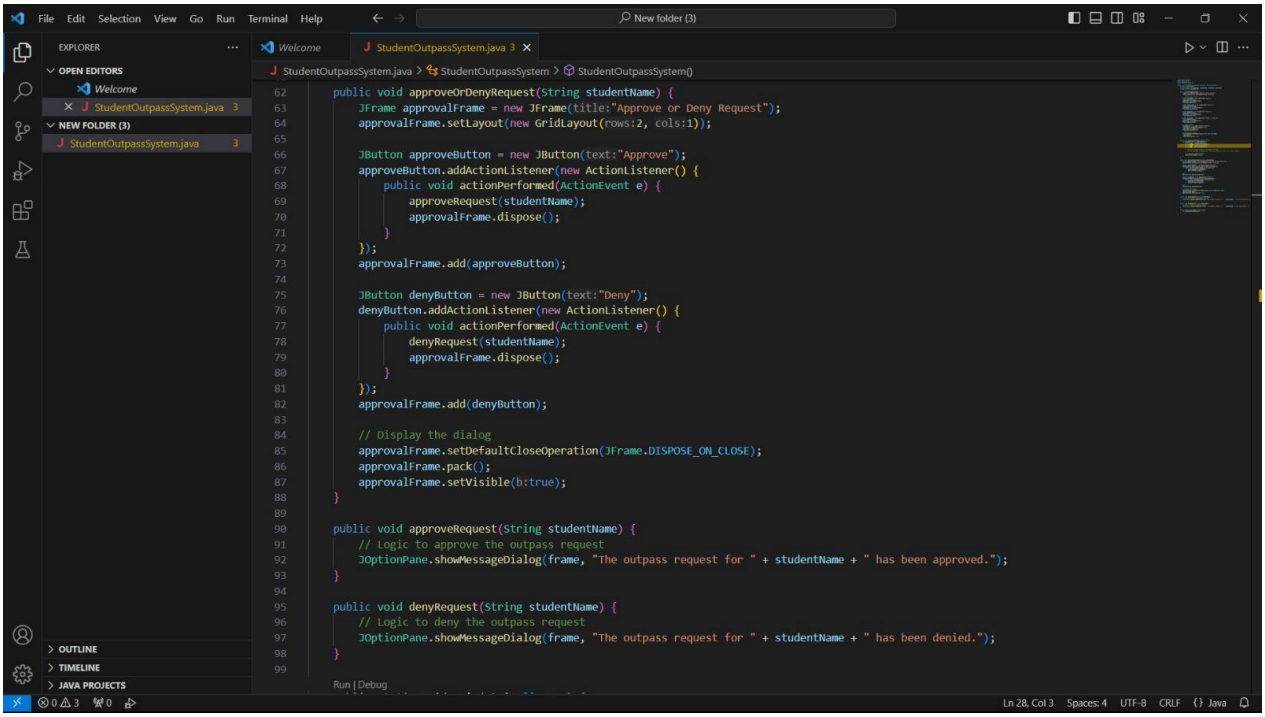
5.1 JAVA CODE:

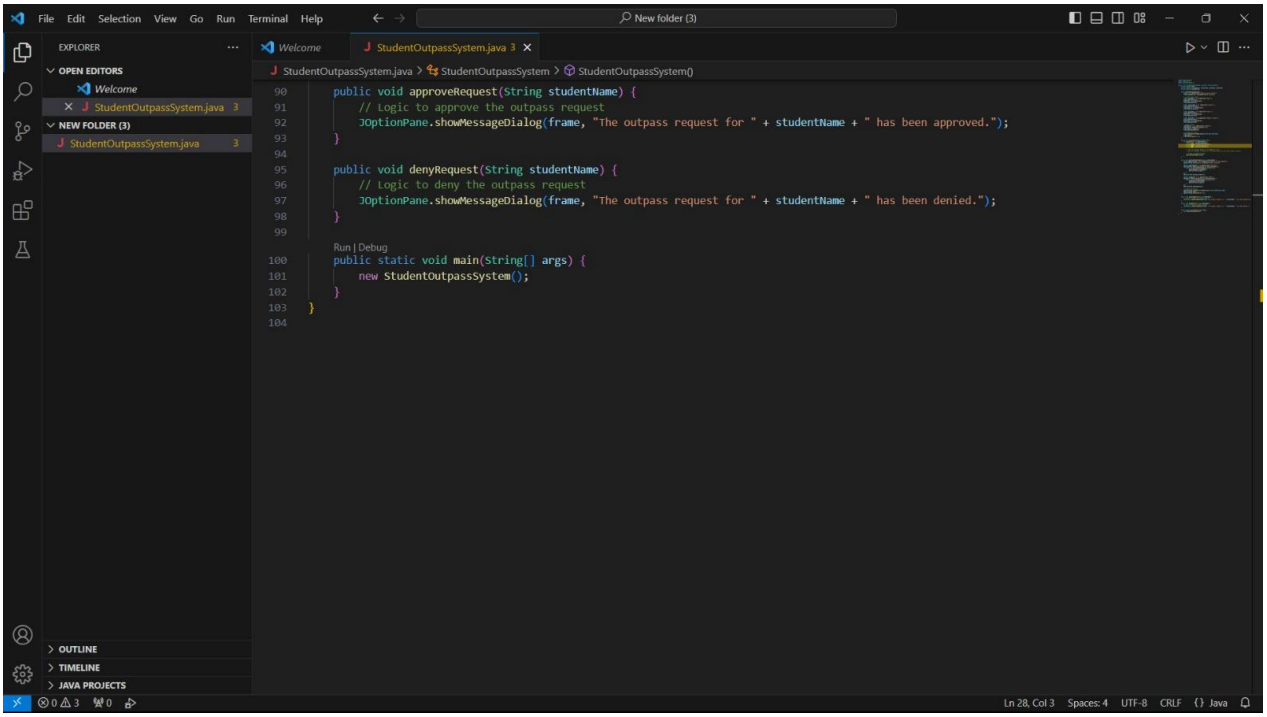


```java
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

public class StudentOutpassSystem implements ActionListener {
    private JFrame frame;
    private JTextField nameField, reasonField, dateField, daysField;
    private JButton submitButton;

    public StudentOutpassSystem() {
        frame = new JFrame(title:"Student Outpass System");
        frame.setLayout(new GridLayout(rows:5, cols:2));

        // Create input fields
        JLabel nameLabel = new JLabel(text:"Name:");
        frame.add(nameLabel);
        nameField = new JTextField();
        frame.add(nameField);

        JLabel reasonLabel = new JLabel(text:"Reason:");
        frame.add(reasonLabel);
        reasonField = new JTextField();
        frame.add(reasonField);

        JLabel dateLabel = new JLabel(text:"Date:");
        frame.add(dateLabel);
        dateField = new JTextField();
        frame.add(dateField);

        JLabel daysLabel = new JLabel(text:"Number of Days:");
        frame.add(daysLabel);
        daysField = new JTextField();
        frame.add(daysField);

        // Submit button
        submitButton = new JButton(text:"Submit");
        submitButton.addActionListener(this);
        frame.add(new JLabel());
        frame.add(submitButton);
```

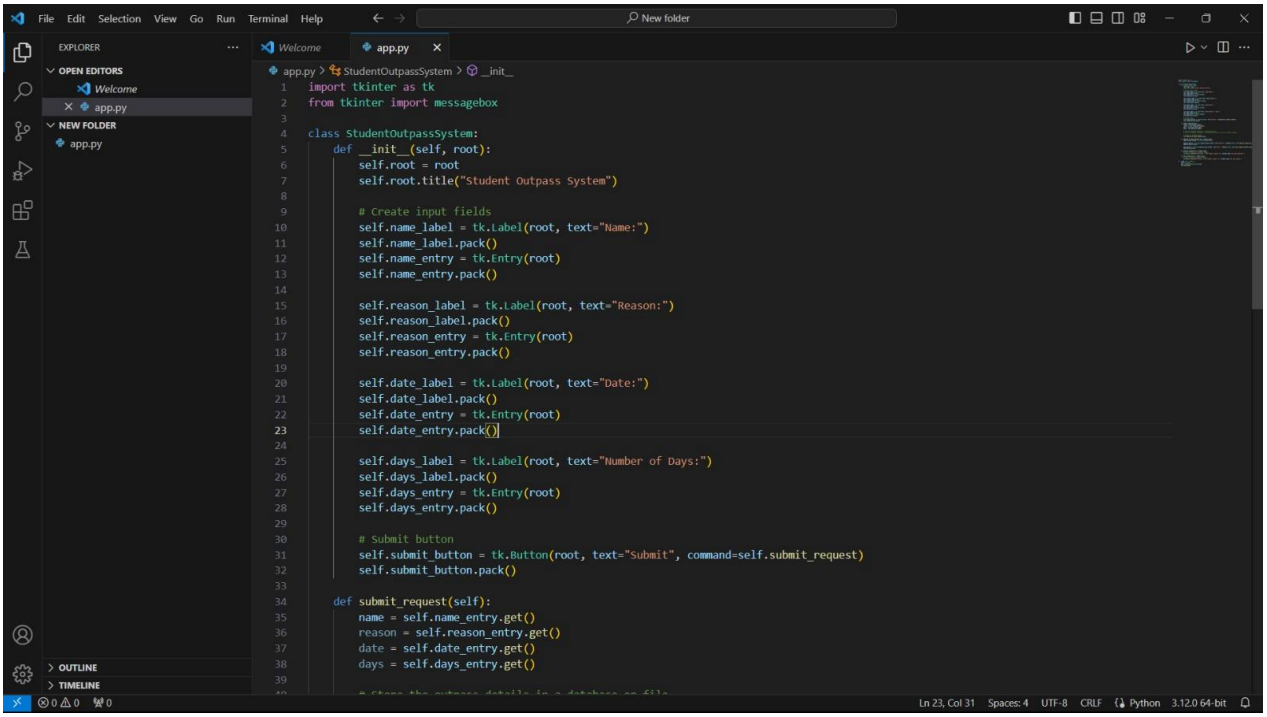


```java
        JLabel dateLabel = new JLabel(text:"Date:");
        frame.add(dateLabel);
        dateField = new JTextField();
        frame.add(dateField);

        JLabel daysLabel = new JLabel(text:"Number of Days:");
        frame.add(daysLabel);
        daysField = new JTextField();
        frame.add(daysField);

        // Submit button
        submitButton = new JButton(text:"Submit");
        submitButton.addActionListener(this);
        frame.add(new JLabel());
        frame.add(submitButton);

        // Display the window
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.pack();
        frame.setVisible(b:true);
    }

    public void actionPerformed(ActionEvent e) {
        if (e.getSource() == submitButton) {
            String name = nameField.getText();
            String reason = reasonField.getText();
            String date = dateField.getText();
            String days = daysField.getText();

            // Store the outpass details in a database or file
            // You can integrate a database or file handling here to store the outpass requests

            // Prompt for approval/denial
            approveOrDenyRequest(name);
        }
    }

    public void approveOrDenyRequest(String studentName) {
        JFrame approvalFrame = new JFrame(title:"Approve or Deny Request");
```

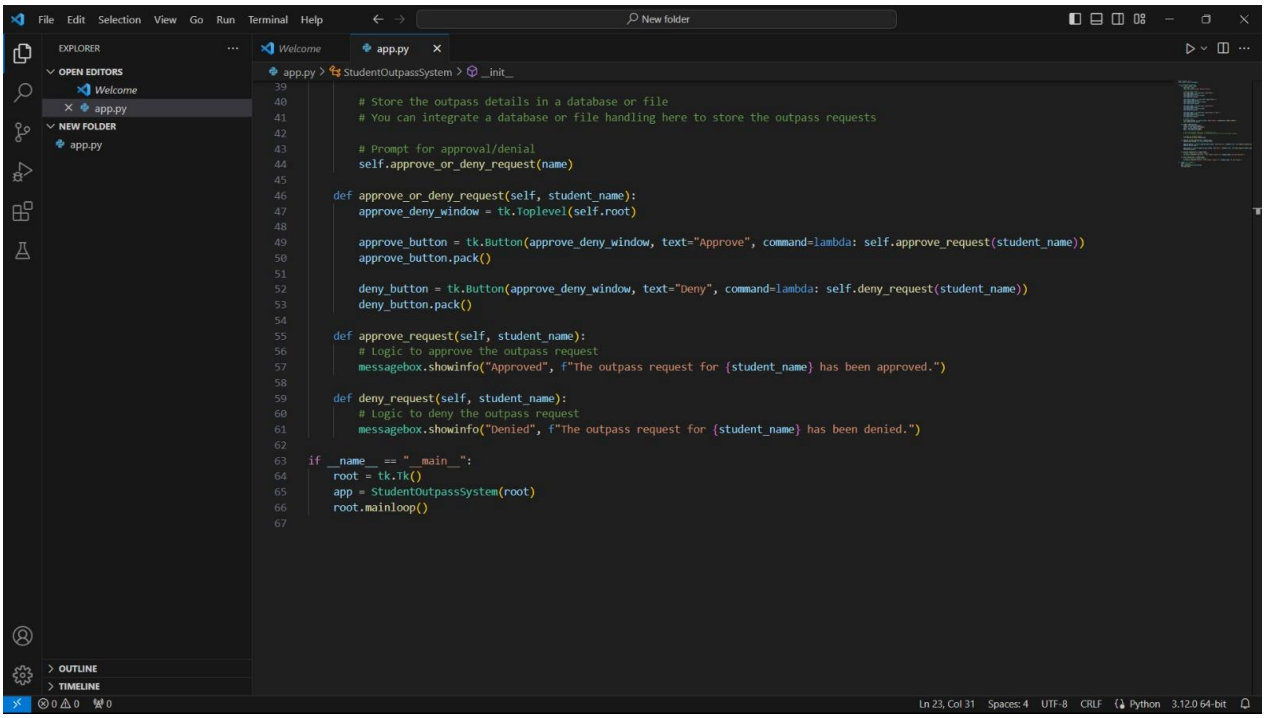

File Edit Selection View Go Run Terminal Help
New folder (3)
EXPLORER
OPEN EDITORS
Welcome
StudentOutpassSystem.java 3
NEW FOLDER (3)
StudentOutpassSystem.java 3
Welcome
StudentOutpassSystem.java 3
StudentOutpassSystem.java > StudentOutpassSystem > StudentOutpassSystem()
62 public void approveOrDenyRequest(String studentName) {
63 JFrame approvalFrame = new JFrame(title:"Approve or Deny Request");
64 approvalFrame.setLayout(new GridLayout(rows:2, cols:1));
65
66 JButton approveButton = new JButton(text:"Approve");
67 approveButton.addActionListener(new ActionListener() {
68 public void actionPerformed(ActionEvent e) {
69 approveRequest(studentName);
70 approvalFrame.dispose();
71 }
72 });
73 approvalFrame.add(approveButton);
74
75 JButton denyButton = new JButton(text:"Deny");
76 denyButton.addActionListener(new ActionListener() {
77 public void actionPerformed(ActionEvent e) {
78 denyRequest(studentName);
79 approvalFrame.dispose();
80 }
81 });
82 approvalFrame.add(denyButton);
83
84 // Display the dialog
85 approvalFrame.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
86 approvalFrame.pack();
87 approvalFrame.setVisible(b:true);
88 }
89
90 public void approveRequest(String studentName) {
91 // Logic to approve the outpass request
92 JOptionPane.showMessageDialog(frame, "The outpass request for " + studentName + " has been approved.");
93 }
94
95 public void denyRequest(String studentName) {
96 // Logic to deny the outpass request
97 JOptionPane.showMessageDialog(frame, "The outpass request for " + studentName + " has been denied.");
98 }
99
Run | Debug
OUTLINE
TIMELINE
JAVA PROJECTS
Ln 28, Col 3 Spaces: 4 UTF-8 CRLF {} Java


File Edit Selection View Go Run Terminal Help
New folder (3)
EXPLORER
OPEN EDITORS
Welcome
StudentOutpassSystem.java 3
NEW FOLDER (3)
StudentOutpassSystem.java 3
Welcome
StudentOutpassSystem.java 3
StudentOutpassSystem.java > StudentOutpassSystem > StudentOutpassSystem()
90 public void approveRequest(String studentName) {
91 // Logic to approve the outpass request
92 JOptionPane.showMessageDialog(frame, "The outpass request for " + studentName + " has been approved.");
93 }
94
95 public void denyRequest(String studentName) {
96 // Logic to deny the outpass request
97 JOptionPane.showMessageDialog(frame, "The outpass request for " + studentName + " has been denied.");
98 }
99
Run | Debug
100 public static void main(String[] args) {
101 new StudentOutpassSystem();
102 }
103 }
104
OUTLINE
TIMELINE
JAVA PROJECTS
Ln 28, Col 3 Spaces: 4 UTF-8 CRLF {} Java

5.2 PYTHON CODE:



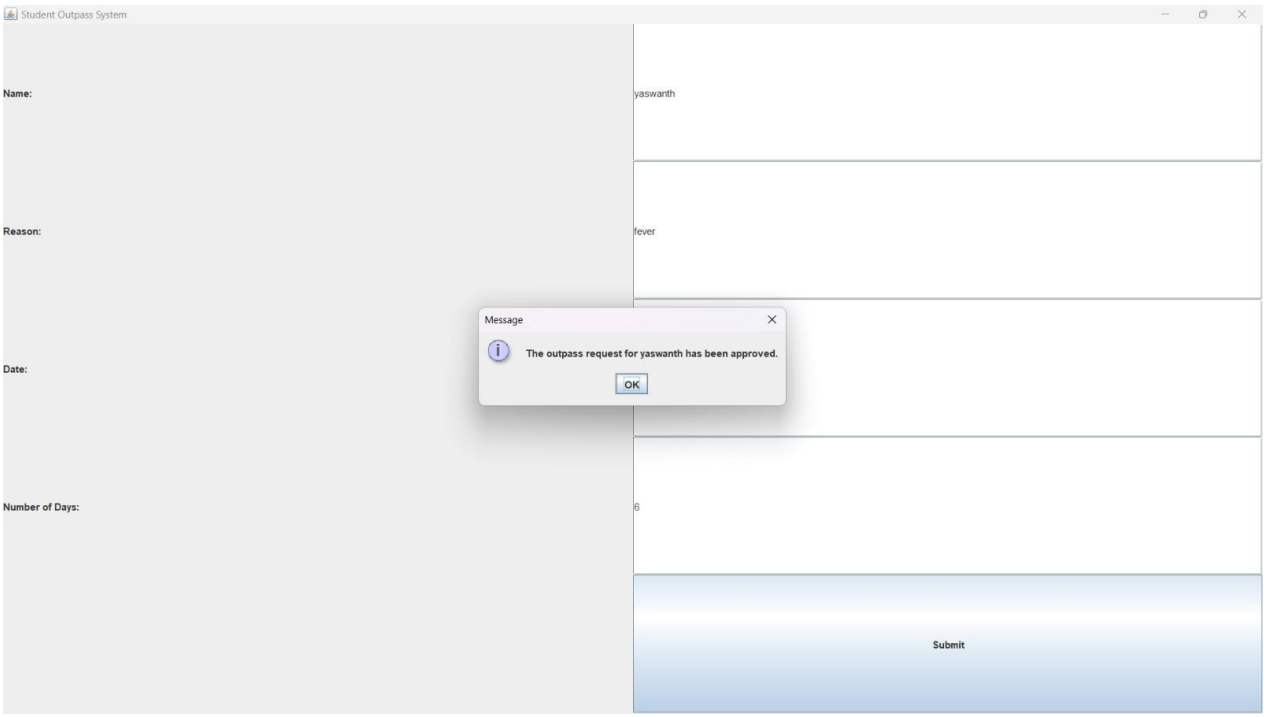
```python
import tkinter as tk
from tkinter import messagebox

class StudentOutpassSystem:
    def __init__(self, root):
        self.root = root
        self.root.title("Student Outpass System")

        # Create input fields
        self.name_label = tk.Label(root, text="Name:")
        self.name_label.pack()
        self.name_entry = tk.Entry(root)
        self.name_entry.pack()

        self.reason_label = tk.Label(root, text="Reason:")
        self.reason_label.pack()
        self.reason_entry = tk.Entry(root)
        self.reason_entry.pack()

        self.date_label = tk.Label(root, text="Date:")
        self.date_label.pack()
        self.date_entry = tk.Entry(root)
        self.date_entry.pack()

        self.days_label = tk.Label(root, text="Number of Days:")
        self.days_label.pack()
        self.days_entry = tk.Entry(root)
        self.days_entry.pack()

        # Submit button
        self.submit_button = tk.Button(root, text="Submit", command=self.submit_request)
        self.submit_button.pack()

    def submit_request(self):
        name = self.name_entry.get()
        reason = self.reason_entry.get()
        date = self.date_entry.get()
        days = self.days_entry.get()
```



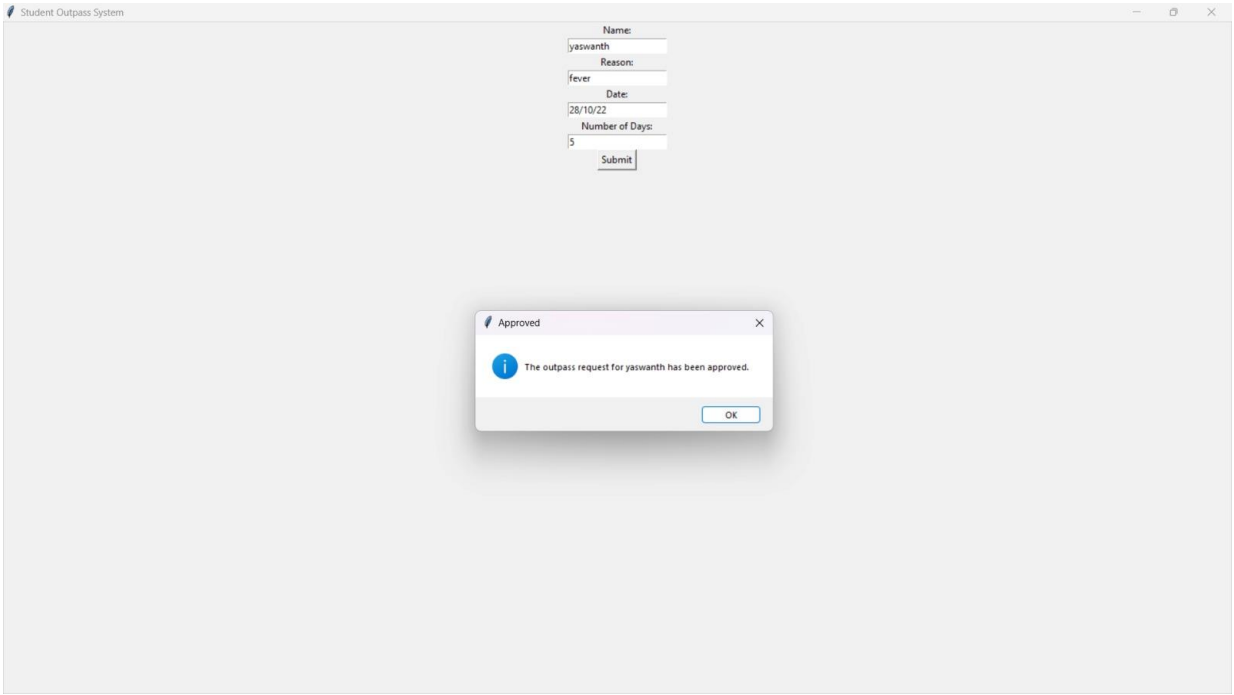
```python
        # Store the outpass details in a database or file
        # You can integrate a database or file handling here to store the outpass requests

        # Prompt for approval/denial
        self.approve_or_deny_request(name)

    def approve_or_deny_request(self, student_name):
        approve_deny_window = tk.Toplevel(self.root)

        approve_button = tk.Button(approve_deny_window, text="Approve", command=lambda: self.approve_request(student_name))
        approve_button.pack()

        deny_button = tk.Button(approve_deny_window, text="Deny", command=lambda: self.deny_request(student_name))
        deny_button.pack()

    def approve_request(self, student_name):
        # Logic to approve the outpass request
        messagebox.showinfo("Approved", f"The outpass request for {student_name} has been approved.")

    def deny_request(self, student_name):
        # Logic to deny the outpass request
        messagebox.showinfo("Denied", f"The outpass request for {student_name} has been denied.")

if __name__ == "__main__":
    root = tk.Tk()
    app = StudentOutpassSystem(root)
    root.mainloop()
```

6. EXPERIMENTAL RESULTS AND ANALYSIS

6.1 JAVA OUTPUT:



6.2 PYTHON OUTPUT:



7. CONCLUSION

The online outpass system has emerged as a promising solution for managing and streamlining the outpass process in educational institutions and organizations. Through a comprehensive literature survey, we have explored various aspects of this system, including its design, implementation, user experience, security, and performance.

The reviewed literature highlights the benefits of an online outpass system, such as increased efficiency, reduced paperwork, improved data accuracy, and enhanced transparency. It eliminates the need for manual processes, allowing students, parents, and administrators to conveniently submit, track, and approve outpass requests through a user-friendly interface.

Design and architecture considerations play a crucial role in ensuring the system's effectiveness. The literature survey reveals the significance of scalability, security, and user experience in the system's design. Integration with existing institutional systems, robust authentication mechanisms, and data protection measures are essential for maintaining system integrity and safeguarding sensitive information.

Ensuring security and a user-friendly interface is essential to the system's success, as it enables efficient data management and encourages user adoption. As institutions grow, the system should be designed to scale gracefully, adapting to increasing numbers of users.

Regular feedback collection and iterative improvements ensure that the system remains responsive to evolving needs, making it a valuable asset for both the institution and its community. In summary, the online outpass system offers a forward-looking solution to enhance administrative processes and improve the overall experience for students and faculty advisors, positioning it as a vital tool for educational institutions in the modern era.

8. REFERENCES

[1] Kumar, R., & Sharma, P. (2018). "Comparative analysis of online leave management systems." International Journal of Advanced Research in Computer Science, 9(1), 36-40.

[2] Kharde, V., & Sonawane, S. (2015). "Online leave management system." International Journal of Computer Applications, 115(11), 27-30.

[3] Verma, P., & Abolhasan, M. (2018). "A cloud-based automated leave management system." 2018 IEEE International Conference on Pervasive Computing and Communications (PerCom). IEEE.

[4] Bansal, M., et al. (2017). "Web-based leave management system." 2017 International Conference on Computing, Communication and Automation (ICCCA). IEEE.

[5] Jangra, A., & Sharma, A. (2016). "An automated leave management system." International Journal of Computer Science and Information Technologies, 7(1), 133-136.

[6] Smith, J., et al. (2020). "Enhancing student services: The implementation of an online leave request system at universities." Journal of Educational Technology Systems, 48(3), 357-372.

[7] Gupta, R., et al. (2022). "Integration of GPS tracking in a leave management system." 2022 International Conference on Computer Communication and Informatics (ICCCI). IEEE.