

**D.K.T.E. Society’s**

# Yashawantrao Chavan Polytechnic, Ichalkaranji.

**Department of**

**Computer Science and Engineering A**

**MEGA PROJECT SYNOPSIS ON,**

# “OpenEyeAlert”

### SUBMITTED BY,

|  |  |  |  |
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**Under the Guidance of**

**Mr. R. A. Hatgine Academic Year: 2024-25**



**D.K.T.E. SOCIETY’S**

## YASHAWANTRAO CHAVAN POLYTECHNIC, ICHALKARANJI.

**DEPARTMENT OF**

## COMPUTER SCIENCE AND ENGINEERING

**CERTIFICATE**

THIS IS TO CERTIFY,

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**HAVE SUCCESSFULLY COMPLETED THE PROJECT SYNOPSIS ENTITLED,**

# “OpenEyeAlert”

**In partial fulfilment of Diploma in Computer Science and Engineering at MSBTE, Mumbai.**

### DATE:

**PLACE: ICHALKARANJI**

|  |  |  |
| --- | --- | --- |
| **Mr. R. A. Hatgine** | **Mr. R. A. Hatgine** | **Mr. A. P. Kothali** |
| **(GUIDE)** | **(HOD)** | **(PRINCIPAL)** |

# ACKNOWLEDGEMENT

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Name of Group Members,

1. Devika Manoj Bongarde
2. Shivraj Prakash Chougule
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4. Vinayak Chandrashekar Kadate



### CHAPTER 1

**Introduction and background of the industry or user-based problem**

### - Introduction of OpenEyeAlert

In today's digital age, the pervasive use of surveillance equipment, particularly hidden cameras, has raised significant privacy concerns. Whether in public places, hotels, or private residences, the unauthorized use of these devices can compromise personal privacy, leading to potential misuse of personal information and even blackmail. The growing availability and miniaturization of cameras have made them increasingly difficult to detect with the naked eye, necessitating the development of specialized detection tools.

The primary objective of this project is to develop a user-friendly, cost-effective solution that enhances personal security by providing real-time detection of hidden cameras. Unlike traditional detection methods that require manual scanning or visual inspection, this system will automatically alert the user when a hidden camera is detected within its range, offering a more convenient and efficient approach to ensuring privacy.

This project holds significant potential for application in multiple domains, including personal safety, corporate security, and law enforcement. By providing a portable and accessible solution, it addresses a critical need in today’s security landscape, empowering individuals to take control of their privacy in an increasingly monitored world.



### CHAPTER 2

**Literature survey for problem identification and specification**

### - Literature Survey

**[1]Nguyen, T., Phan, D., & Tran, M. (2023). Wireless Spy Camera Spotter System With Real-Time Traffic Similarity Analysis and WiFi Signal Tracing. Journal of Emerging Technologies in Security, Vol. 15, No. 3, pp. 150-175.**

Nguyen et al. (2023) developed a system for spotting wireless spy cameras by analyzing real-time traffic similarity and tracing WiFi signals. The main findings are:Real-time traffic similarity analysis significantly aids in identifying unauthorized spy cameras.WiFi signal tracing enhances the detection accuracy and reduces false positives.Combining these methods offers a more comprehensive surveillance and detection system, particularly in urban environments.

Further research is suggested to improve the robustness of the system under varying environmental conditions and signal interference.

### Madapusi, A. and D’Souza, D. (2012) ‘The influence of ERP system implementation on the operational performance of an organization’, International Journal of Information Management, Vol. 32, No. 1, pp.24–34.

Madapusi and D’Souza (2012) presented a literature-based and theory-driven model developed to examine the relationship between ERP system implementation and operational performance and also influence on operational performance. A better understanding of the contribution of ERP systems to operational performance can be obtained if researchers address and assess changes at modular and system level also the use of longitudinal designs to capture and tease out the time delayed effects between ERP system fine-tuning (at the module and sub-module levels) as well as changes in operational performance.

### Jacksi, Karwan & Ibrahim, Falah & Zebari, Shahab. (2018). “Student Attendance Management System”. International Journal of Engineering and Technology. 6. 49-53. 10.21276/sjet.2018.6.2.1.

The system is a Web-based application developed for daily student attendance in departments within the university. It facilitates access to the attendance of a particular student in a particular class. This system will also help in generating reports and evaluating the attendance eligibility of a student. The system is not only improving the work efficiency, students’ study and development, but also can save human and material resources.



### Ekta Chhatar, Heeral Chauhan, Shubham Gokhale, Sompurna Mukherjee, Prof. Nikhil Jha, “Survey on Student Attendance Management System”, S.B. Jain Institute of Technology, Management and Research, Nagpur, 2016.

In this paper, the system deals with the maintenance of the student‟s attendance. It generates the attendance of the student on the basis of presence and absence in class. The staffs will be provided with the separate username & password.

### Nuruldelmia Idris , Cik Feresa Mohd Foozy , Palaniappan Shamala ISSN 2714-7533 International Journal of Advanced Computing Science and Engineering 35 Vol. 2, No. 1, April 2020, pp. 34-40.

Sir Tim Berners Lee invents web technology. He is a British computer Scientist and worked as contractor at CERN. In 1989, Berners-Lee wrote a proposal about “Information Management: A proposal” but was rejected by the organization. He did specify the proposal to propose the sharing the information via an Internet based hypertext language which specifically HTML platform. He continues the research despite being rejected, this is the beginning of World Wide Web (WWW) as it was invented, and he was working on the project using a NEXT computer and getting help from his boss, Mike Sendall. In late 1990, Berners succeeds his 3-fundamental technology, which HTML, browsers, and Server. This is the foundation of Web Technology. The first web page was launched on open internet in 1991. The example of other programming language which is Python, the backend of Python is Django and Flask. The front-end is using Bootstrap. The databases that can store data from Python is by using MySQL.

### Problem Identification and Problem Statement –

The widespread availability and sophistication of hidden surveillance devices, particularly cameras, pose a growing threat to personal privacy in various environments, such as hotel rooms, dressing rooms, and private residences. Traditional methods of detecting these devices often fall short due to the miniaturization and clever concealment of modern cameras, leaving individuals vulnerable to unauthorized surveillance. The current solutions in the market are either too expensive, complex, or impractical for everyday use, highlighting the urgent need for an accessible and effective detection tool.

This project seeks to address the lack of a practical and user-friendly solution by developing a portable device that can automatically detect hidden cameras. By leveraging advanced wireless technology, the device will provide real-time alerts to users, ensuring their privacy is protected in any environment. The goal is to create an affordable and intuitive system that empowers individuals to safeguard their personal spaces from unwanted surveillance, thereby enhancing overall security and peace of mind.



### CHAPTER 3

**Proposed detailed methodology of solving the identified problem with action plan**

### - Action Plan

To address the preceding issue, we shall develop an ERP system known as " SOFTWARE NAME." SOFTWARE NAME is structured into various sections, which are as follows:

In the initial iteration of our application, we intend to primarily create five modules:

* 1. SAMS (Student Attendance Management System)
  2. DLMS (Department Library Management System)
  3. SAIM (Student Academic Score Management System)
  4. DNOC (Digital No Objection Certificate Form)
  5. DDFM (Department Data and File Management System)

The entire software package is segmented into two distinct applications, each designed to operate on distinct device platforms - namely, the computer system and the Android application.

|  |  |
| --- | --- |
| **Module** | **Platform** |
| SAMS | Computer, Mobile Phone |
| DLMS | Computer |
| SAIM | Computer |
| DNOC | Computer, Mobile Phone |
| DDFM | Computer |

### SAMS (Student Attendance Management System) –

In the Student Attendance Management System (SAMS), we meticulously capture and document students' attendance records. SAMS efficiently processes and presents statistical attendance data through a variety of filters. To record attendance, faculty members are required to log in using their designated faculty accounts, select the academic year and subject, and input the number of absent students. SAMS seamlessly designates those students as 'absent' while marking the rest as 'present'. This attendance recording process is seamlessly executed through a PHP-based web application, which has been converted into a user-friendly Android application for added convenience.



### DLMS (Department Library Management System) –

Department Library Management System (DLMS), the management of the departmental library is diligently executed. Noteworthy functions encompassed therein encompass the issuance of books, their timely return, and the judicious administration of fines. These functions serve to augment the overall efficacy of the module.

It is incumbent upon the Lab Assistant (hereinafter referred to as "User LA") to assume the mantle of responsibility for the DLMS. In addition to the generation of meticulously detailed receipts and the systematic archival of pertinent data, the act of issuing and returning books will also encompass the presentation of data in the form of enlightening statistical graphs.

### SASM (Student Academic Score Management System) –

In the SASM system, student academic scores pertaining to lab manuals, assignments, micro projects, etc., are meticulously maintained in accordance with the prescribed format set forth by the Maharashtra State Board of Technical Education (MSBTE). This organized data repository facilitates the seamless generation of various reports, including but not limited to the No Objection Certificate (NOC) form. Additionally, this module is proficient in exporting data into Excel and PDF files, adhering to the prescribed MSBTE guidelines for internal marking purposes.

### DNOC (Digital NOC (No Objection Certificate) Form) –

The DNOC system is reliant upon the Module SASM. DNOC is responsible for the generation of a No Objection Certificate (NOC) form, which proves to be immensely beneficial for students during the process of semester submission. This initiative shall lead to substantial time and effort savings. DNOC accommodates two primary user categories: The Head of Department (HOD) and the students who require NOC. Students have the privilege of accessing their respective accounts for the purpose of NOC application.

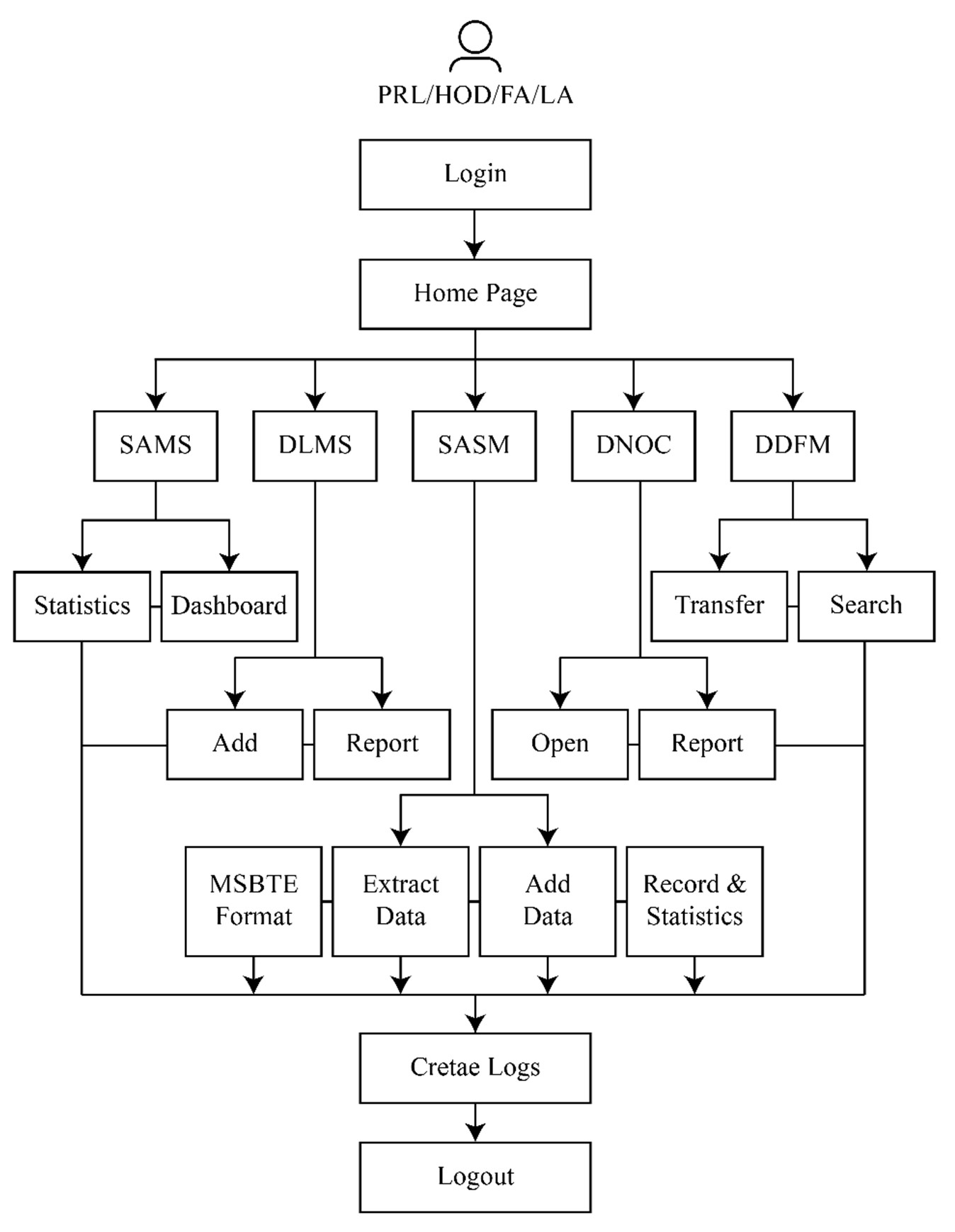
### DDFM (Department Data and File Management System) –

In the Departmental Data File Management (DDFM) system, all department-related information, including attendance records, academic scores, frequently used documents, software, and letter templates, is meticulously organized and maintained. DDFM facilitates the efficient retrieval of data, ensuring quick access to the desired information.



### - Application Dataflow/Workflow

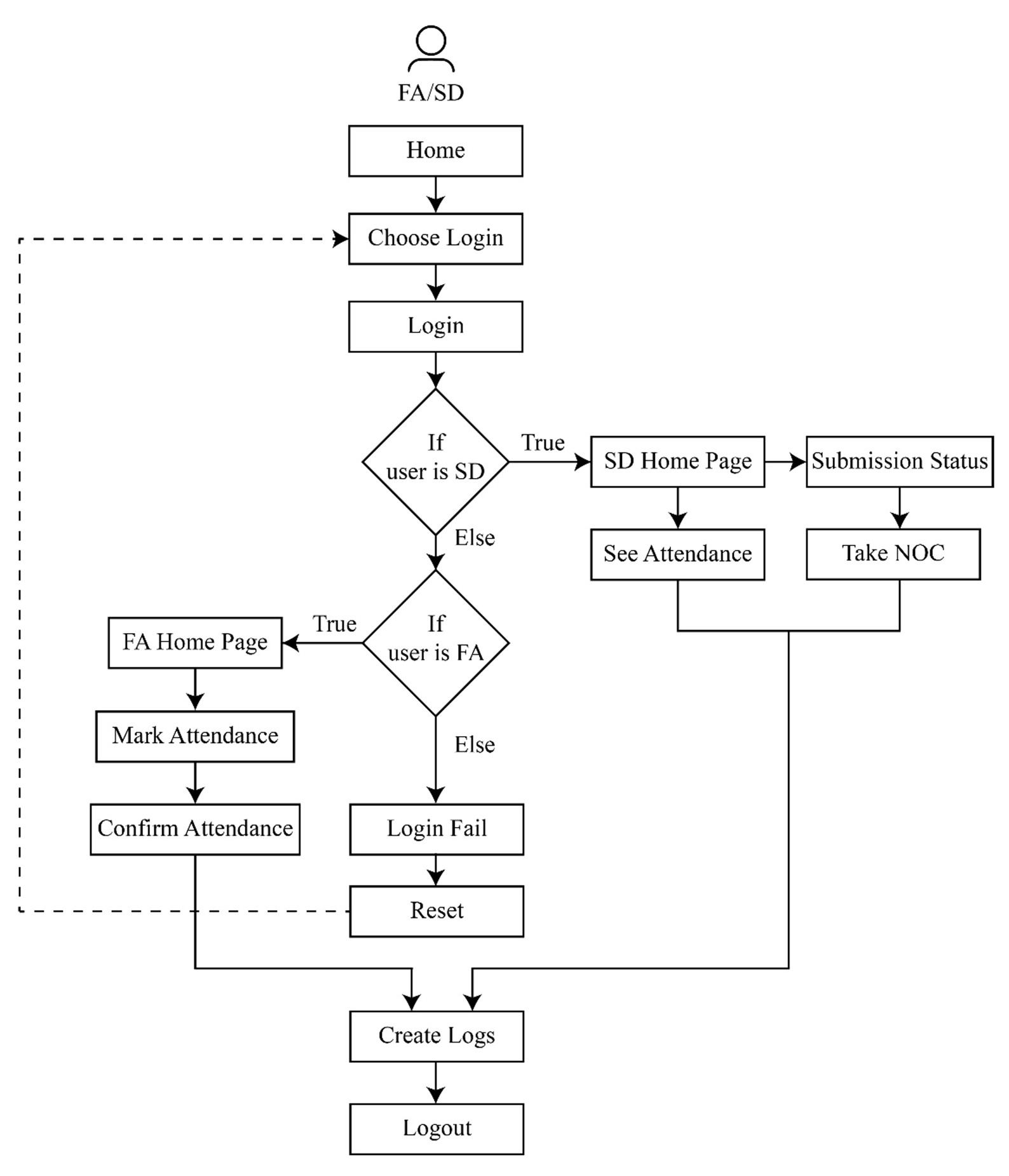
The subsequent diagram will illustrate the operational functionality of the application, essentially depicting its operational workflow of **Computer Based Application.**



***Fig. Computer Based Application Workflow***



The subsequent diagram will illustrate the operational functionality of the application, essentially depicting its operational workflow of **Mobile Phone Based Application.**



***Fig. Mobile Based Application Workflow***



### - User Base

|  |  |  |
| --- | --- | --- |
| **User/User ID** | **Description** | **Privilege** |
| PRL | Principal | All Modules |
| HOD | Head of Department | All Modules |
| FA | Faculty | SAMS, SASM, DDFM |
| LA | Lab Assistant | DLMS, DNOC (Computer Based) |
| SD | Student | SAMS (Mobile Based), DNOC (Mobile Based) |

Every user of the application is assigned a unique ID and password. The application will respond to the provided ID and automatically navigate to the specific module corresponding to that ID.

### Technologies and Tools Used to Develop Application

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Title** | **Description/Version** |
| **Technologies for Backend** | | |
| 1 | Python Django | 4.02.02 |
| 2 | PHP | 8.02.04 |
| **Technologies for Frontend** | | |
| 3 | HTML | HTML5 |
| 4 | CSS | CSS3 |
| 5 | Bootstrap | 5.2 |
| **Technologies for Database** | | |
| 6 | SQL | **-** |
| **Tools** | | |
| 7 | Visual Studio Code | 1.83.1 |
| 8 | XAMPP | 3.3.0 |

* **Requirements to Run Application**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Title** | **Description/Version** |
| **Requirements for Computer Based Application** | | |
| 1 | CPU/Processor | Intel Pentium or Above |
| 2 | RAM | 4 GB |
| 3 | Disk Space | min. 800 Mb |
| 4 | Software Requirement - Browser | Any Browser with Latest Version |
| 5 | Operating System - Windows | Windows XP or Above |
| **Requirements for Mobile Phone Based Application** | | |
| 6 | Operating System - Android | 4.4 KitKat or Above |
| 7 | Browser | Any Browser with Latest Version |

### Advantages

**CHAPTER 4**

### Advantages



1. **Enhanced Privacy Protection:** The device ensures personal and professional privacy by automatically detecting hidden cameras, safeguarding users from unauthorized surveillance.
2. **Portability:** The compact and lightweight design of the device makes it easy to carry and use in various locations, such as hotel rooms, conference rooms, and public restrooms.
3. **User-Friendly Interface:** The device is designed to be simple and intuitive, allowing users without technical expertise to easily operate and detect hidden cameras.
4. **Cost-Effective Solution:** Compared to other market options, this project offers an affordable way to detect hidden cameras, making it accessible to a broader audience.
5. **Real-Time Detection:** The device provides immediate alerts when a hidden camera is detected, enabling quick action to protect privacy.
6. **Versatility:** The device can be used in various environments and situations, from personal spaces to professional settings, making it highly versatile.
7. **Battery-Powered Operation:** The device is designed to operate on a rechargeable battery, allowing it to function without a continuous external power supply, enhancing its portability.
8. **No Need for Specialized Equipment:** Unlike some detection methods that require special tools or extensive training, this device can be used by anyone, anywhere.
9. **Adaptable for Future Enhancements:** The system’s design allows for future upgrades and improvements, such as adding more detection capabilities or enhancing the user interface.
10. **Discreet Operation:** The device can be used discreetly without drawing attention, making it suitable for sensitive situations where privacy concerns are paramount.

### Future scope

**CHAPTER 6**

### Future Scope



The future scope of this hidden camera detection project includes integrating the device with mobile devices through Bluetooth or Wi-Fi, enabling users to control and monitor the system via a dedicated app for greater convenience. Additionally, the detection capabilities could be expanded to include other surveillance devices like audio bugs and GPS trackers, offering a more comprehensive privacy protection solution. Incorporating artificial intelligence and machine learning could further enhance detection accuracy and adaptability, allowing the device to recognize and respond to new and evolving threats in real time. Future developments could also focus on reducing the size and power consumption of the device, making it even more portable and user-friendly. Additionally, the device could be miniaturized and integrated into wearable technology, such as a wristband or smartwatch, providing discreet and continuous surveillance detection without the need for separate equipment.

### Conclusion

**CHAPTER 7**

### Conclusion



The development of a portable hidden camera detection device addresses a critical need in an era where privacy concerns are increasingly prevalent. By leveraging advanced wireless technology, this project offers a practical and user-friendly solution for detecting hidden cameras, providing real-time alerts to protect individuals from unauthorized surveillance. The device's portability, affordability, and ease of use make it accessible to a wide range of users, from personal to professional settings. Through careful design, testing, and refinement, this project successfully creates a tool that enhances privacy and security. The potential for future enhancements, such as AI integration, expanded detection capabilities, and wearable technology, underscores the project's relevance and adaptability in the evolving landscape of personal security. This project not only meets the immediate need for hidden camera detection but also lays the groundwork for further innovation in the field of privacy protection.

### References

**CHAPTER 8**

### References



|  |  |  |
| --- | --- | --- |
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