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LASER LIGHT SECURITY

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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

ABSTRACT

This report illustrates the mid-term development of the laser light security system which is based on Arduino UNO. There has been a noticeable increase in thefts and break-ins over the past several years in a variety of places throughout the world. No industry or corporation can be guaranteed to be completely safe from the constantly evolving dangers, even if the majority of regulatory and regulating bodies are working to prevent such activities. People need to be proactive in addressing possible risks and losses and have a solid security system in place in order to reduce them.

A security system may be made more secure by adding a Laser Security Alarm system to it or by installing a completely new security system. This technology is portable, uses less energy, and is easy to use. It guarantees that an organization's infrastructure and security postures are always safeguarded. It recognizes the intruder and triggers the Buzzer, which alerts the other people and helps to considerably decrease or completely eliminate the risks and problems brought on by the intrusion.

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1. INTRODUCTION

1.1. Introduction to the Topic

One of the most crucial aspects of daily living is security. Every person has a fundamental need for security. For a calm life, we must have the perception that we are secure and that there is no threat. The most fundamental need of every human is the need for security. The technological world is always changing. The security of people's well-being and the safety of their own possessions, including their houses and belongings, is a worry as the globe becomes increasingly electronically linked. A calm existence depends on having the perception that one is safe and that everything in society is okay.

Thus, in this project, a security system comprising of laser light will be constructed. The Laser Security Alarm System can offer a practical remedy for the aforementioned problems. This technology has the potential to be crucial in the security and military sectors, safeguarding everything from common home items to a company's most valuable assets. When there is a breach in the security system, notification alerts will also be made to be sent out. When no one is around to hear the security alarm go off, this will be useful.

1.2. Current Scenario

The latest data on theft and burglary of the country comes from the fiscal year 2018-2019. In fiscal 2018–19, a total of 2,874 burglaries were recorded across the nation, up from 1,628 the year before, or a roughly 43.3% rise. According to data given by the Nepal Police, there were nine theft instances on average each day in 2018–19.

More than 50% of crimes, mostly in the Kathmandu Valley, were committed in unattended homes and rented rooms of working families during the day. The number of arrests increased in 2018–19 along with the number of theft cases. In comparison to the prior fiscal year, police made 4,117 theft-related arrests in 2018–19, an increase of almost 42.8%. Despite a national trend toward an increase in burglaries, the valley saw a marked decline. (Himalayan News Service, 2019)

1.3. Problem Statement

Technology now is significantly more advanced than it formerly was. Today, security is a key consideration. The world's technology develops daily. To carry out its operations, the criminal organization also develops its technologies. As a result, security systems need to adapt over time in order to shield criminals.

Most robbers are demonstrated to be discouraged by the presence of an alarm security system in homes, hospitals, schools, businesses, and industries. Instead of attacking facilities that are protected by security alarms, criminals frequently target vulnerable ones.

Also in Kathmandu, half of the theft happened during the day when no one was present at the property. This project of laser security currently being built focuses only on small scale security, however, it can always be developed to be used on a larger scale.

1.4. Project as a Solution

Laser light is used to cover a small region. It has been demonstrated that laser light can travel long distances without scattering. Additionally, it is only visible at the source and incidence point and invisible everywhere. These two characteristics help "laser security," a contemporary security method, progress.

The security alarm sounds and the focus light turns on to focus on the invader when something or someone crosses the laser line. By placing a mirror for reflection at each corner, a safe barrier of one laser beam may be created. It consists of manually switchable sensors and a straightforward alarm system.

Since laser lights are less visible and have a greater range, they serve as effective security. Since laser lights are less noticeable and have a greater range, they provide an effective security system for smaller-scale security needs. The cost of installing this system on a bigger scale may be high.

1.5. Aims and Objectives

1.5.1. Aims

The main goal of the project is to build a simple and affordable laser security alarm system using an Arduino Uno, a laser light, an LDR, and a buzzer, as well as to demonstrate its usefulness in protecting against invasion.

1.5.2. Objectives

i. To understand the operation of the Arduino, LDR, and Buzzer.

ii. To serve as an extra layer of security in unattended homes.

iii. To investigate and demonstrate the operation of a laser security alarm system.

iv. Create an easy-to-use and cost-effective security system.

v. To reduce theft and burglary in unattended homes.

vi. To serve as a perimeter alarm system around properties, alerting individuals in the area of any physical entry.

1.6. Report Structure

1.6.1. Background

By outlining the project's needs and describing the project and its intended audience, the background helps readers comprehend the project better. To have a better grasp of the features and components, it also helps to research similar projects and contrast this project with others of a similar nature.

1.6.2. Development

Development describes the process through which the project will be developed. It describes how techniques were chosen and taken into consideration, and it analyzes each methodology's many stages. Additionally, it displays the various work breakdown structures (WBS) that are implemented and that need to be implemented in a chronological style (Gantt chart).

1.6.3. Analysis of progress

This section describes and evaluates the current progress. It presents the situation as it stands right now, analyzes it, and demonstrates the development's progress. The circuit diagram illustrates how hardware and software development are progressing. Additionally, it gives a plan of action to make up for lost time and finish the project, as well as an explanation of why the project was running behind schedule based on the Gantt chart of the proposal.

1.6.4. Future Work

Future Work describes the phases (development and documentation) that still need to be finished as well as the strategies for carrying out and finishing the project.

2. BACKGROUND

2.1. Client's Description and Requirements

2.1.1. Client's Name

The Factory Team (TFT)

2.1.2. Description

The client for this project is The Factory Team which is in Kamal Pokhari. It is a fashion line company that produces goods made out of leather. The company has agreed to be the client for this project as they find this project interesting and useful.

Client Approval Letter: Appendix (Client Letter)

2.2. Understanding the Project

2.2.1. IoT as a platform

IoT (Internet of Things) refers to the network of gadgets that are online and share and gather data. An Arduino or Raspberry Pi serves as the core component of the Internet of Things and may be configured to carry out certain functions.

To interact with the environment and produce the data, it may include one or more sensors. Because of their connection and data sharing capabilities, IoT devices can execute simple to complex activities and may be quite helpful while running a variety of operations.

2.2.2. Project Elaboration

The main parts of the laser security system are the laser, the light dependent resistor (LDR), the buzzer, the Arduino, and the GSM shield. A laser is a concentrated source of light that shoots out one color of light in a single direction.

A single laser beam will be reflected by mirrors placed in certain locations before being reflected to the LDR. The LDR instantly sends a signal to the Arduino UNO if the light is stopped and does not fall on it for whatever reason. The Arduino receives a signal that triggers the electric buzzer. All of the components in this security alarm system are powered by an Arduino while a battery may also be used if necessary.

The LDR detects laser light and produces a voltage when it is struck. The LDR's voltage output changes when the laser beam stops and is unable to reach it, the Arduino notices this change and activates the buzzer. As the alarm is triggered, the user's mobile device will thereafter get this warning through the GSM shield.

2.2.3. Project Deliveries

The project is mainly targeted towards household and workspace security as it is built on a small scale. This system of security can be implemented within the premises of one’s property for various purposes.

First use being as a form of security from outsiders that might intrude into the property. It can also be used to keep one’s toddlers in a certain boundary or for keeping a roommate from not being able to run through one’s belongings.

On a larger scale, this system can be implemented in banks, bigger offices, etc. as one may have seen it in movies.

2.3. Survey Result

A survey was conducted through google forms which involved the responses of 18 people. Through the survey, it was found that 94% of the people agreed that security of property and their own selves is very important and were using basic forms of security such as locks and cctvs.

While 90% of the people agreed that advanced technologies such as motion detectors, etc. would be great forms of security as they believe the security systems were pretty outdated and the same people would opt for such forms of security and 89% of the people agreed they would implement a security system with laser light and an SMS alarm system, if given the chance.

Survey Results: Appendix (Survey Results)

2.4. Similar Projects

2.4.1. Project 1: Laser security system

Author: SeminarsOnly

The project creates a laser-based security system which uses only laser light, LDR and battery as its major components. Thus, it does not utilize any IoT technology. The security system was built with the main objective simply being the understanding of a laser security system and its building.

(SeminarsOnly, 2020)

2.4.2. Project 2: Laser Security system using Arduino nano

Author: Faneshadi

In this project, created by Faneshadi uses a microcontroller Arduino nano R3 as its main component along with laser diode, LDR, buzzer, etc. The project aims to make a simple home security system where the Arduino communicates with the alarm system using the LDR when the laser diode fails to hit the LDR. (Faneshadi, 2020)

2.4.3. Project 3: Home security using Laser tripwire

Author: Farwah Nawazi

The project built by Farwah Nawazi comprises of a laser light, LDR and a battery that supplies power to the system. The concept of the security system is similar to the other projects mentioned and is based on the principle of interruption. (Nawazi, 2021)

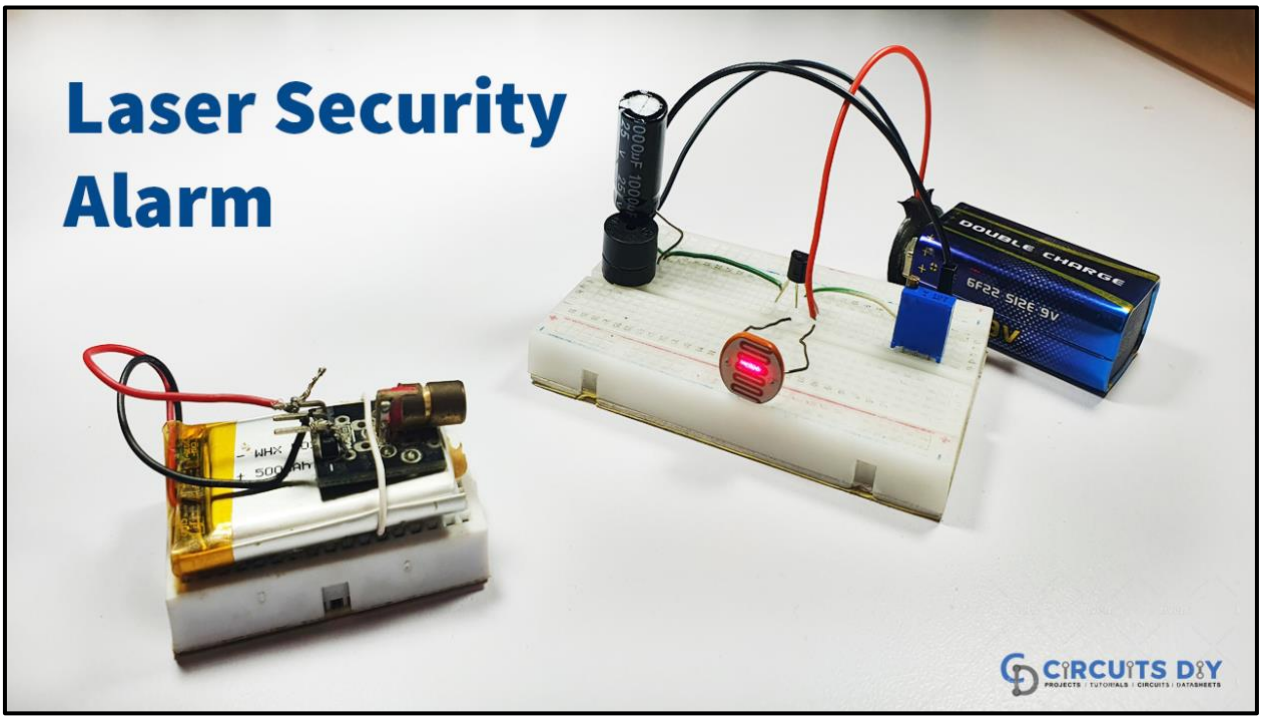

Figure 1: Project by Farwah Nawazi

2.5. Project Comparison Table

S. no.	Features	Project 1	Project 2	Project 3	This Project
1.	Microcontroller	✗	Arduino nano	✗	Arduino UNO
2.	Communication means	✗	✗	✗	✓
3.	Alarm System	✓	✓	✓	✓
4.	Sends SMS	✗	✗	✗	✓
5.	Powered by battery	✓	✗	✓	✓
6.	Data Recalling	✗	✗	✗	✓
7.	Easy to use	✓	✓	✓	✓
8.	Cost	Low	High	Low	High

Table 1: Project Comparison Table

2.6. Conclusion from Similar Projects

When all the characteristics offered by comparable projects are taken into account, it is evident that the designed system offers all the essential functions at a very low cost. With less complexity, it performs competently.

While all the projects fulfill the quota of alarming when the laser is disturbed none had the feature where an alarm notification is sent through SMS to the user's phone unlike this project. Also, only one other project had used a microcontroller while the rest powered through only battery.

Resource Requirement: Appendix (Resource Requirement)

3. DEVELOPMENT

3.1. Considered Methodologies

3.1.1. Agile Methodology

It is a process in which the customer's needs and the accompanying solutions develop as a result of the joint efforts of teams and the client. The assignment is divided into numerous phrases, and by collaborating with the stakeholders, continual improvement and iteration are carried out. Sprints are the separated segments (Wrike, 2022).

This approach was taken into consideration since it allowed for the division of diverse jobs into manageable chunks, but it was not chosen because it did not allow for client engagement or participation in every sprint.

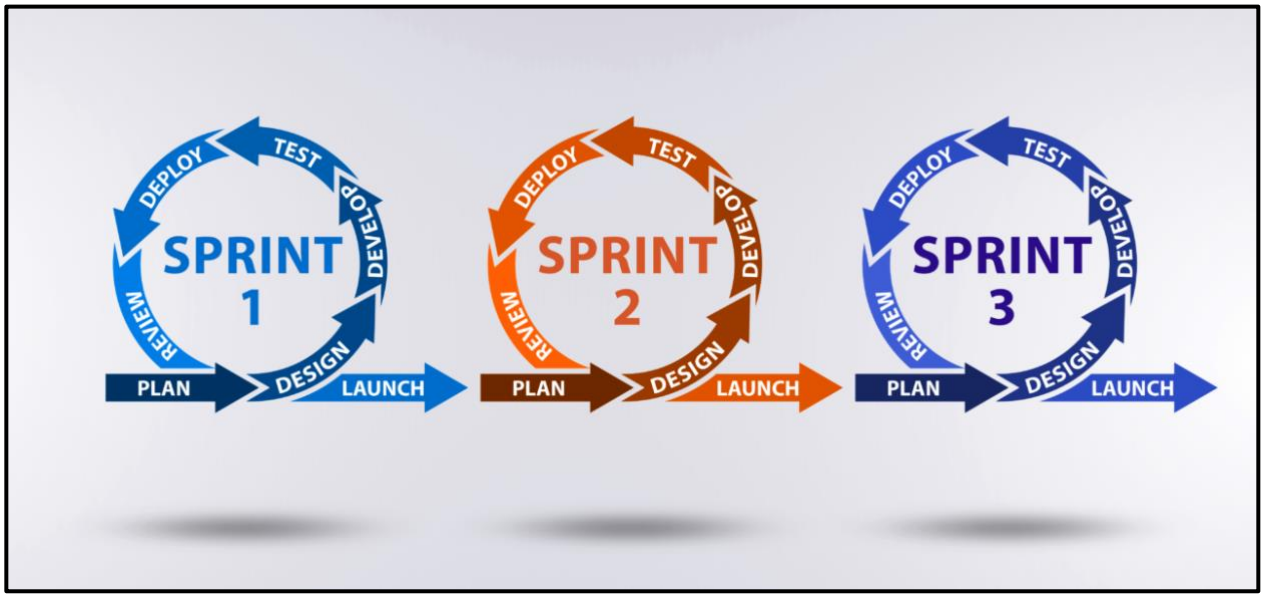

Figure 2: Agile Methodology (Adam, 2022)

3.1.2. Waterfall Methodology

The waterfall method is a linear approach to project management where customer requirements are gathered at the beginning of the project and then a task-sequence plan is created to meet those demands. The waterfall model derives its name from the way each project phase flows into the next, resembling a waterfall.

This method was considered but not applied because in this method all the requirement for the project must be clearly stated and known along with complete knowledge of the project. Thus, this methodology is not flexible and cannot adapt to changes as it is of linear approach. (Donaldson, 2020)

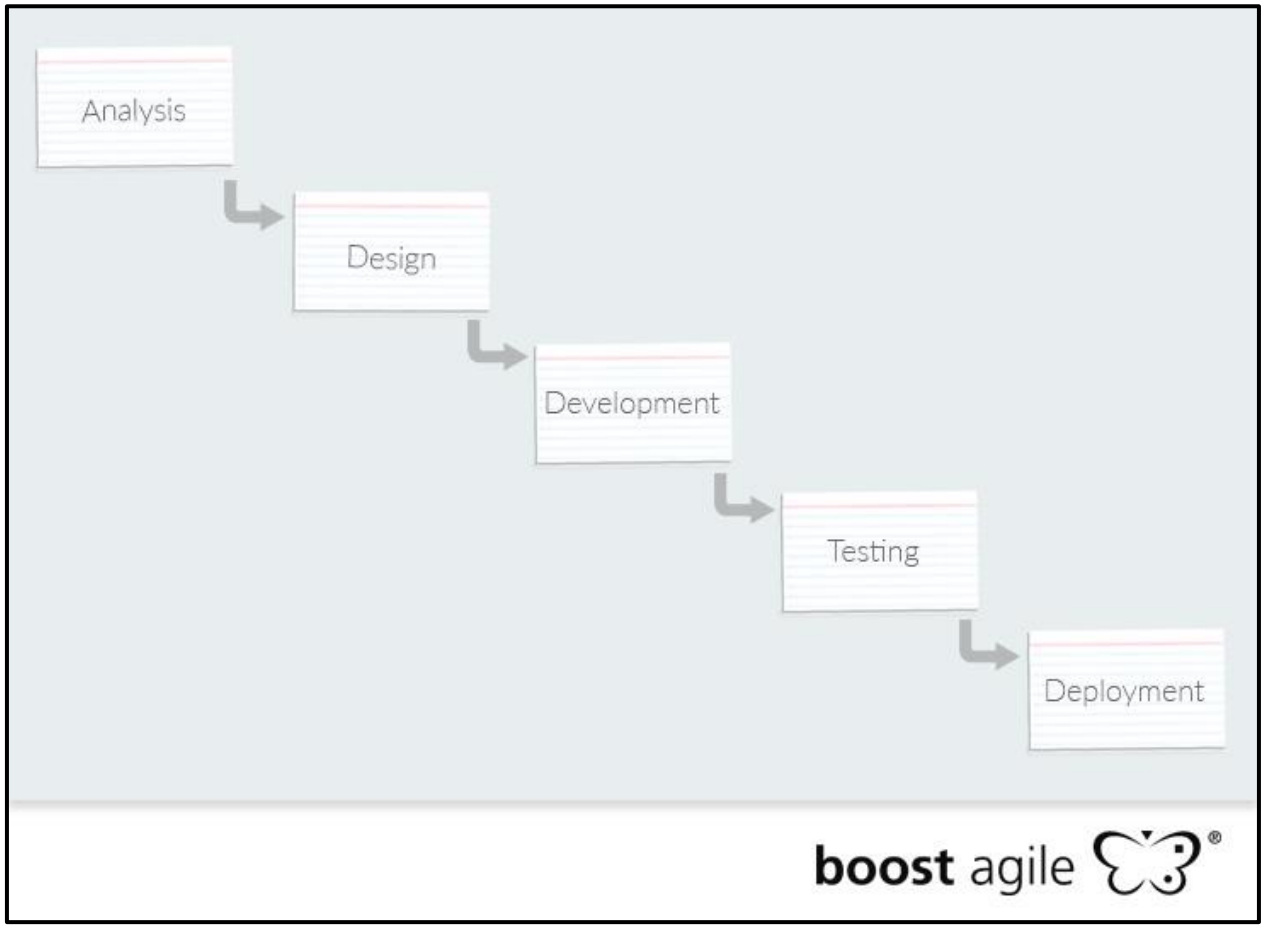

Figure 3: Waterfall Methodology (Donaldson, 2020)

3.2. Selected Methodology

3.2.1. Evolutionary Prototyping

Evolutionary prototyping, tries to create a reliable system by continually improving it until the client's requirements are satisfied. It enables the addition or removal of features in response to changes in requirements. (Easytechnotes, 2021)

Evolutionary prototyping is the approach used for the system since modifications are a common and crucial component of the system. To make the project better, effective, and market-ready, new features might be included or an outdated feature could be eliminated.

The IoT system frequently innovates, and with new ideas come new improvements, allowing the system to remain adaptable. The innovation and modifications that can finally please the consumer are made possible through design, testing, and improvement.

Since the client's requirements are not entirely evident from the project's perspective and may vary over time, the prototype may be updated more than once. In the framework of this system, the evolving prototype process also encourages internal and external supervisory critique.

The advantages and disadvantages of this method are as follows:

Advantages	Disadvantages
i. This model's design is adaptable.	i. It has poor documentation since customer demands are always changing.
ii. Errors are simple to spot.	ii. The requirements could be overly diverse.
iii. Users can be actively involved in the development process.	iii. Customers have the option to ask for the final product as soon as they see the prototype.

Table 2: Methodology pros and cons (Upadhyay, 2022)

The phases of evolutionary prototyping are as follows:

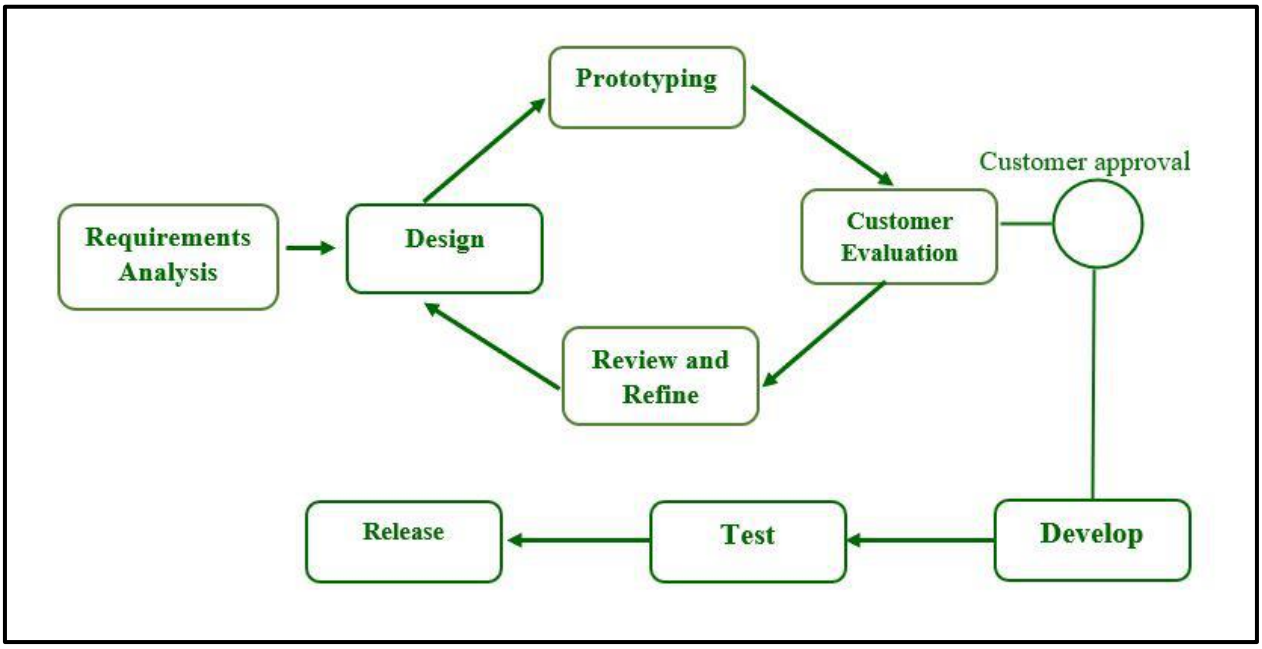

Figure 4: Phases of Evolutionary Prototyping (Sahu, 2021)

i. Requirement analysis:

The initial stage in creating a prototype model is a requirement analysis. The system's goals are precisely specified during this stage. Users of the system are surveyed as part of the procedure to learn what they anticipate from it.

ii. Quick design:

A quick design or a rough design might make up the second stage. The system's fundamental design is developed at this phase. It is not, however, a finished design. It gives the user a brief rundown of the system. The prototype's development is helped by the quick design.

iii. Build a prototype:

A real prototype is intended to back up the knowledge obtained via quick design during this phase. It is a compact, crude functioning model of the ideal system.

iv. Initial user evaluation:

At this point, the client is given the proposed system for first testing. Examining the advantages and disadvantages of the performance model is helpful. Customer comments and recommendations are compiled and sent to the developer.

v. Refinement of prototype:

If the user is unhappy with the present design, you might wish to create a new version that takes user comments and ideas into account. A final system based on the authorized final type is generated if the user is pleased with the enhanced model.

vi. Product Implementation and Maintenance:

The finished system was thoroughly tested before being released to production and used to support the initial version. The programmer is executed often in order to decrease downtime and avert catastrophic failures.

(Sahu, 2021)

3.3. Work Breakdown Structure

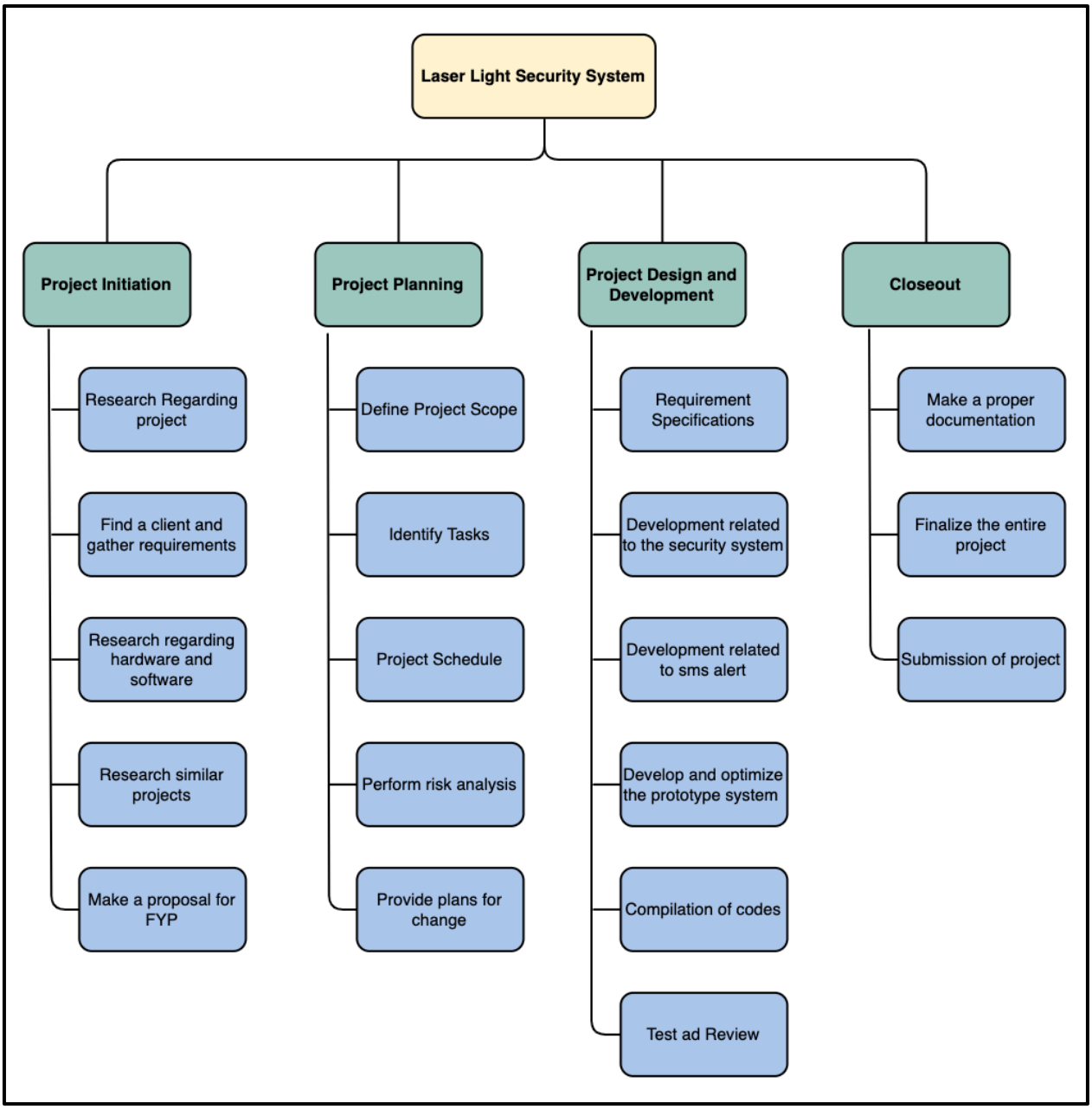

Figure 5: Work breakdown structure

Mile**stone Review: Appendix (**[**Milestone Review**](#)**)**

3.4. Gantt Chart

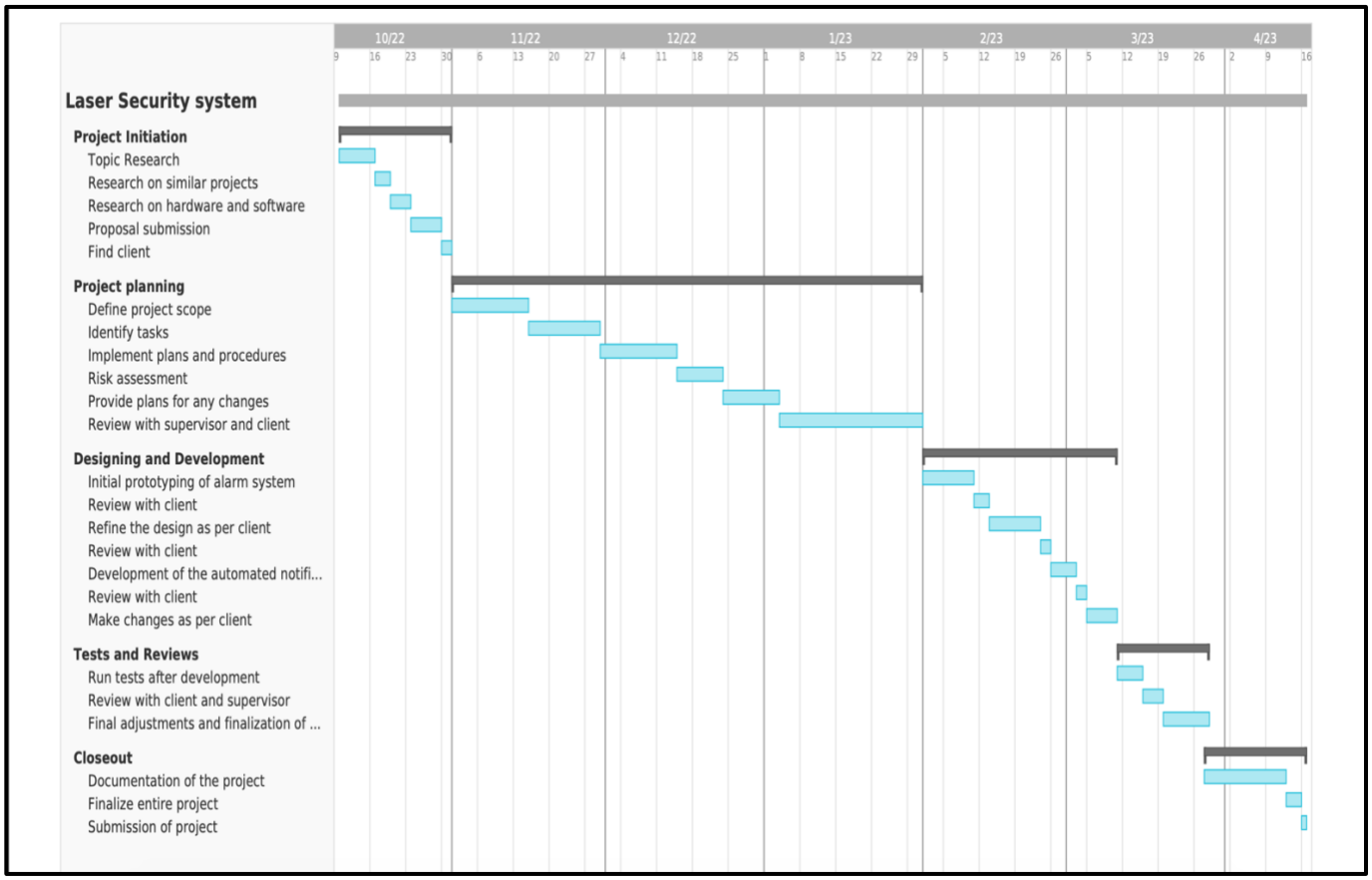

Figure 6: Gantt Chart

The tasks, date and duration for the Gantt chart are displayed in the table below:

S.no.	Task	Start date	End date	Duration
1.	Topic Research	9/10/2022	16/10/2022	8 days
2.	Research on similar projects	17/10/2022	19/10/2022	3 days
3.	Research on hardware and software	20/10/2022	23/10/2022	4 days
4.	Proposal submission	24/10/2022	29/10/2022	6 days
5.	Find client	30/10/2022	31/10/2022	2 days
6.	Define project scope	1/11/2022	15/11/2022	15 days
7.	Identify tasks	16/11/2022	29/11/2022	14 days
8.	Implement plans and procedures	30/11/2022	14/12/2022	15 days
9.	Risk assessment	15/12/2022	23/12/2022	9 days
10.	Provide plans for any changes	24/12/2022	03/01/2023	11 days
11.	Review with supervisor and client	04/01/2023	31/01/2023	27 days
12.	Initial prototyping of alarm system	01/02/2023	10/02/2023	10 days
13.	Review with client	11/02/2023	13/11/2023	3 days
14.	Refining the project	14/02/2023	23/02/2023	10 days
15.	Review with client	24/02/2023	25/02/2023	2 days
16.	Development of automated SMS	26/02/2023	02/03/2023	5 days
17.	Review with client	03/03/2023	04/03/2023	2 days
18.	Refinement as per client	05/03/2023	10/03/2023	6 days
19.	Tests after development	11/03/2023	15/03/2023	5 days
20.	Review with client and supervisor	16/03/2023	19/03/2023	4 days
21.	Final adjustments and finalization of design	20/03/2023	28/03/2023	9 days
22.	Documentation of project	29/03/2023	12/04/2023	15 days
23.	Finalize entire project	13/04/2023	15/03/2023	3 days
24.	Submission of project (date may change)	16/03/2023	16/03/2023	1 day

Table 3: Gantt chart table

4. ANALYSIS PROGRESS

4.1. Progress Table

S.no.	Task	Status	Progress
1.	Topic Research	Completed	100%
2.	Research on similar projects	Completed	100%
3.	Research on hardware and software	Completed	100%
4.	Proposal submission	Completed	100%
5.	Find client	Completed	100%
6.	Define project scope	Completed	100%
7.	Identify tasks	Completed	100%
8.	Implement plans and procedures	In progress	50%
9.	Risk assessment	Completed	100%
10.	Provide plans for any changes	Completed	100%
11.	Review with supervisor and client	Completed	100%
12.	Initial prototyping of alarm system	In progress	40%
13.	Review with client	Incomplete	0%
14.	Refining the project	Incomplete	0%
15.	Review with client	Incomplete	0%
16.	Development of automated SMS	Incomplete	0%
17.	Review with client	Incomplete	0%
18.	Refinement as per client	Incomplete	0%
19.	Tests after development	Incomplete	0%
20.	Review with client and supervisor	Incomplete	0%
21.	Final adjustments and finalization of design	Incomplete	0%
22.	Documentation of project	Incomplete	0%
23.	Finalize entire project	Incomplete	0%
24.	Submission of project (date may change)	Incomplete	0%

Table 4: Progress Table

4.2. Progress Review

4.2.1. Current Scenario

The procedure of choosing a topic and conducting a feasibility study were done at the initial stage to determine if the concept was practical or not. A client was then chosen. A meeting with the client was performed to determine the first need.

Cost estimates were made based on the requirements, and the majority of the hardware components were bought to begin the development process. Additionally, research on comparable projects, tools, and techniques was carried out in order to have a thorough understanding before beginning the project work.

An alarm system, the first component, had already begun development. Currently, 40% of the initial component's work has been finished.

Development Work: Appendix (Development)

4.2.2. Progress Timeline

The progress of the work for the project has been going well and along the timelines created and a few of the works are going quicker than expected. While there were new tasks that had to be done such as interim report and survey forms, etc. These new tasks have not hampered any flow of work up to date.

4.2.3. Action Plan

Since the flow of work is good and there has been no hindrance that has caused the project to come to a halt, there shall be no new actions taken. All the requirements and work for the projects shall continue in accordance with the Gantt chart.

At this rate, the project might be completed earlier than expected.

4.2.4. Circuit Diagram

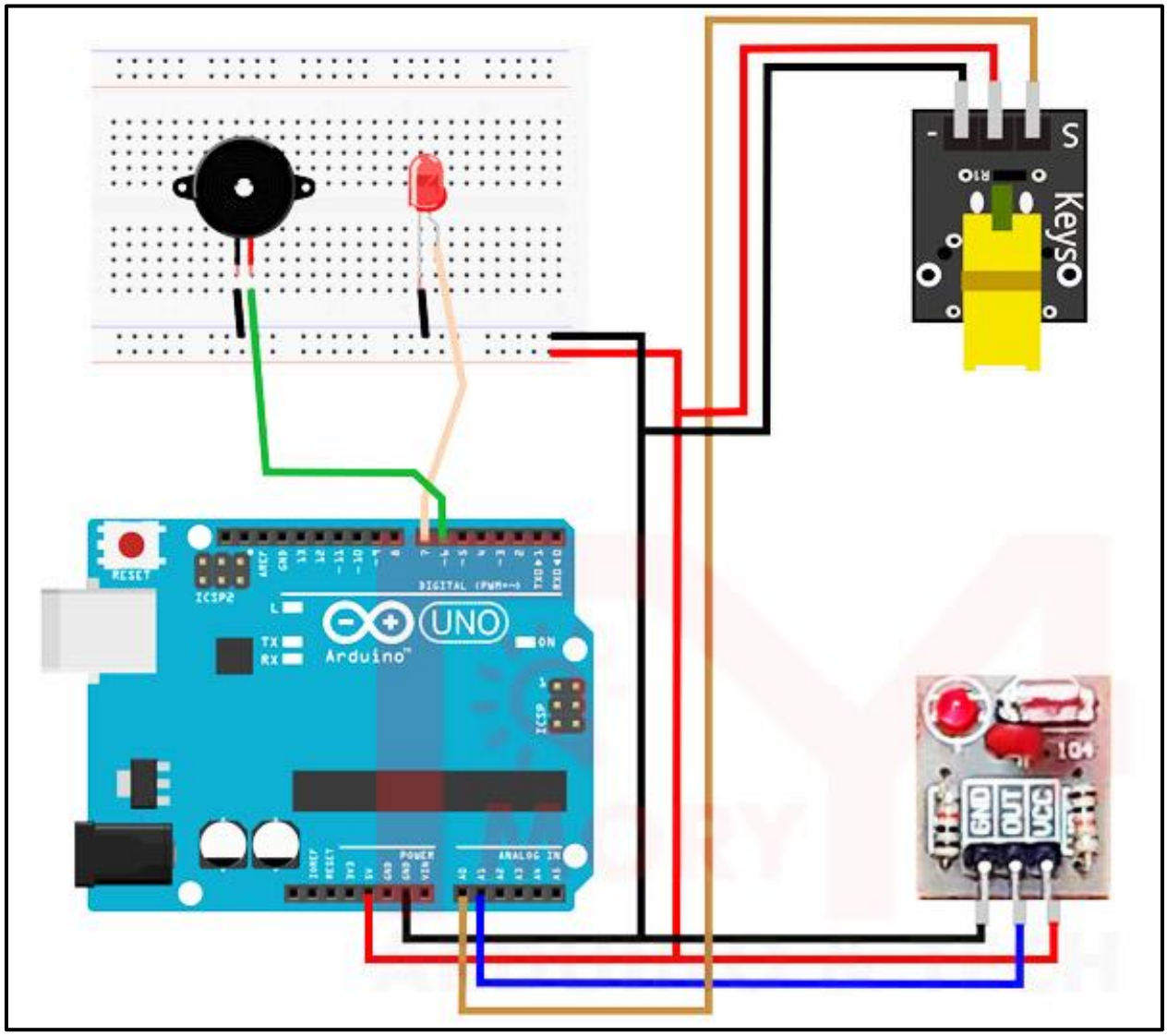

Figure 7: Circuit diagram of Laser alarm system

In the circuit diagram, above the Arduino is the microcontroller and the laser light and LDR are connected to the analog pins, ground and the 5v pin for current. While the breadboard is connected to the ground too, via the breadboard the buzzer and LED are connected to the Arduino. The diagram below shows the Sim900, which acts as the SMS sender in this project. Though the diagram maybe different, but the Arduino below is taken into account as the one above, thus they are the same Arduino.

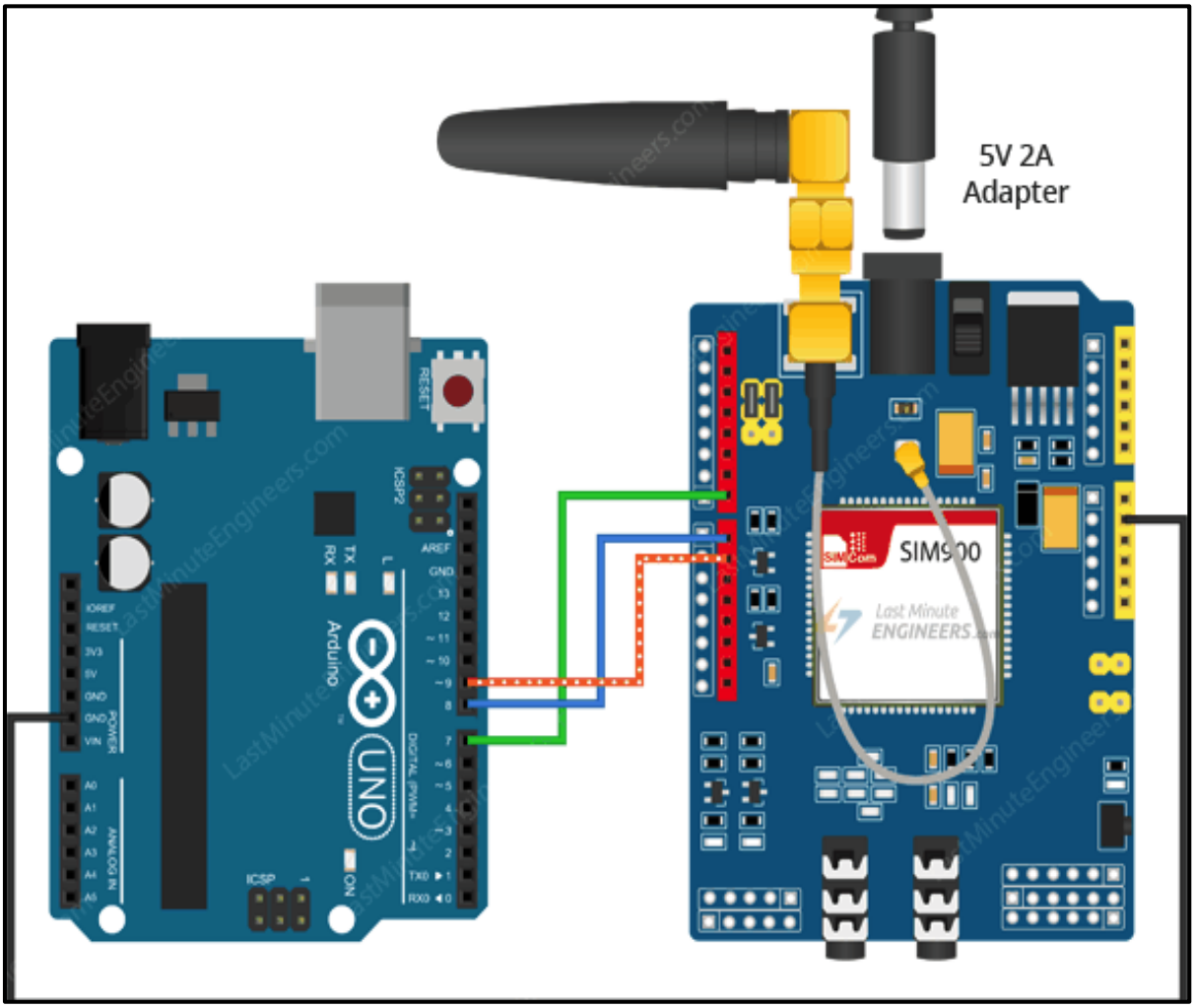

Figure 8: Circuit diagram of the automated SMS system

5. FUTURE WORKS

5.1. Prototype Development

To create the prototype system, I would concentrate on the development. Since the initial requirement collection is already finished in the first step, referred to as the initial idea, I would work on the second phase of the evolving prototype process.

The prototype will be built around the client's fundamental needs. There will be two sections to the prototype. The first is the laser alarm system that uses an Arduino Uno, LDR, laser and buzzer.

The second part of the system consists of an automated SMS system and uses a GSM shield that connects to the Arduino. In order to send an alert SMS to the user, in case the user is far away from the alarm.

While a rough alarm system has been developed already, now for future tasks, an SMS system and a solid structure is required to place the components.

5.2. Prototype Refinement

At this step, the client's feedback is gathered, and adjustments are made in accordance with their preferences. According to the client's requirements, the product from the prototype development phase is adjusted. Until the client is completely satisfied, requirements collecting, revision, and client evaluation are repeated.

5.3. Testing and Documentation

The finished product is tested and put into use in the client's location. The final documentation phase is completed at the same time as the development phase.

6. REFERENCES

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7. APPENDIX

7.1. Resource Requirement

The hardware requirement for the project are as follows:

Laptop or acomputer:	To program the system and document the project's details, a laptop or desktop computer with an internet connection is required.
An Arduino UNO:	In the project, Arduino is a microcontroller board and serves as the central system since it is configured to regulate and direct all of the sensors as well as analyze the data.
A GSM Shield:	GSM shield connects an Arduino to the internet, through which an Arduino can send or receive SMS and even make calls. This will help in sending an SMS when the buzzer is alarmed.
Laser Light:	The laser light acts as the barrier of security. The light lands on the LDR and when the light is interrupted or does not land on the LDR, the Arduino will trigger the buzzer.
Buzzer:	A buzzer is an auditory signaling device that is commonly used as an alarm, timer, and other similar functions. When the link between the laser and the LDR fails, the LDR sends a signal to the Arduino, which activates the Buzzer, which sounds a high-pitched alarm.
Light Dependent Resistor (LDR):	A light-dependent resistor (LDR), is a variable resistor or light sensor device that decreases resistance when illuminated and increases resistance when exposed to darkness. Because of its light sensitivity, it

	immediately sends a signal to the Arduino if the light is interrupted and does not fall on the LDR, even for a short period of time.
Battery:	In this project a 9V battery will be used. The battery will be the power source of this project.
Wires:	To link devices in this project, connecting cables are utilized. Connecting wires allow an electrical current to travel from one point on a circuit to another because electricity requires a medium to flow through. The majority of connecting cables are made of copper or aluminum.
Switch:	A switch is a device that is used to connect and disconnect electrical circuits. It is the little button that switches on and off electronics. Switches are most commonly employed in electrical applications. Switches are commonly seen in electronic devices.

The software requirements are:

Programming language:	C/C++ C/C++ is the programming language that will be used for programming the project.
Arduino software:	It is an open-source software where the codes are written down in C language and is uploaded to the Arduino board in use. It is used to help program the project.
Documentation software:	The documentation process involves the use of a variety of tools. Microsoft Word, snipping tools, draw.io, Gantt chart, etc.

7.2. Survey Results

A survey was conducted through google forms which involved the responses of 18 people. Through the survey, it was found that 94% of the people agreed that security of property and their own selves is very important and were using basic forms of security such as locks and cctvs.

50% of the people agreed that the security measures and tools used were outdated and 61% of the people voted that the burglars and thieves are becoming advanced.

While 90% of the people agreed that advanced technologies such as motion detectors, etc. would be great forms of security and the same people would opt for such forms of security.

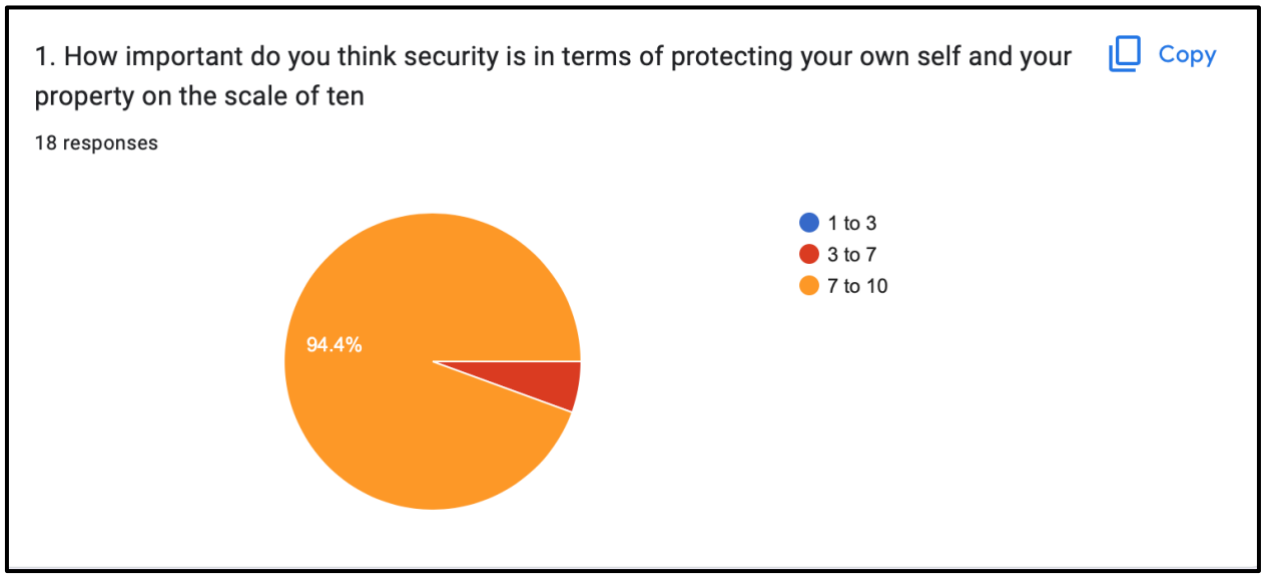


Figure 9: Survey result 1

Figure 10: Survey result 2

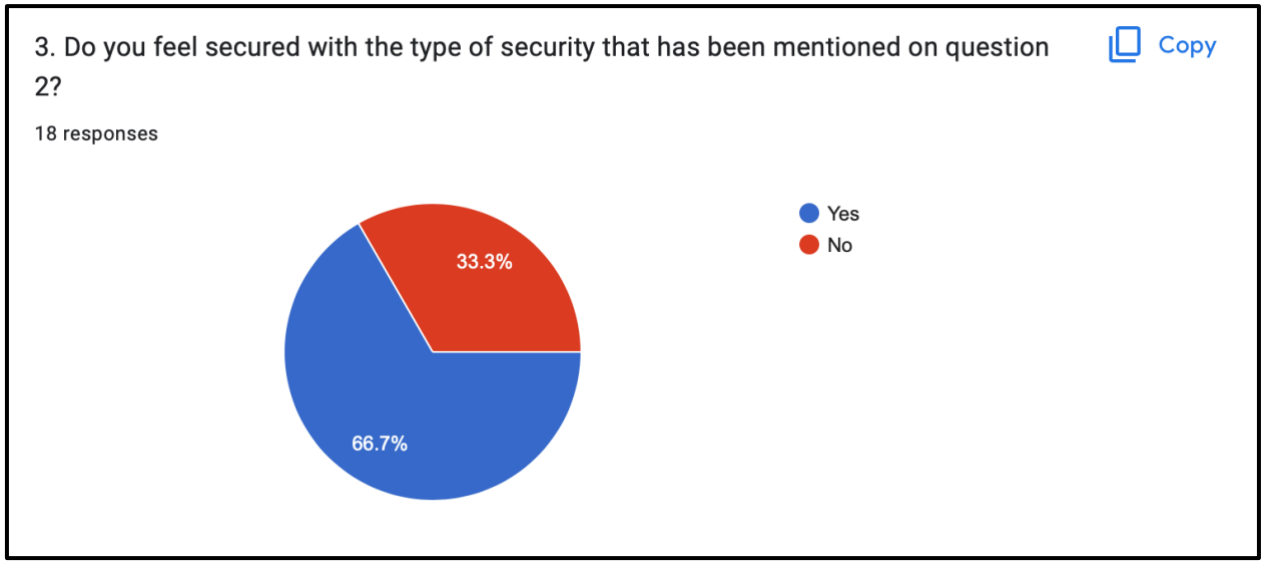


Figure 11: Survey result 3

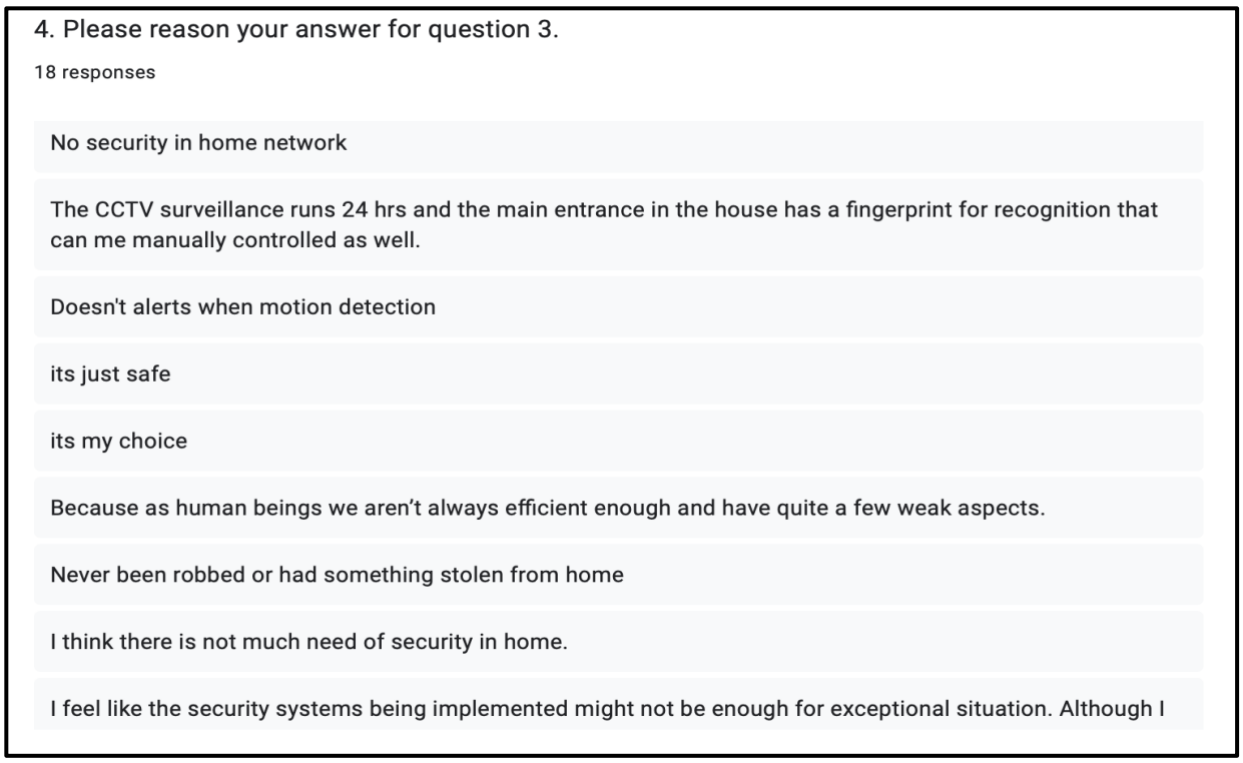


Figure 12: Survey result 4

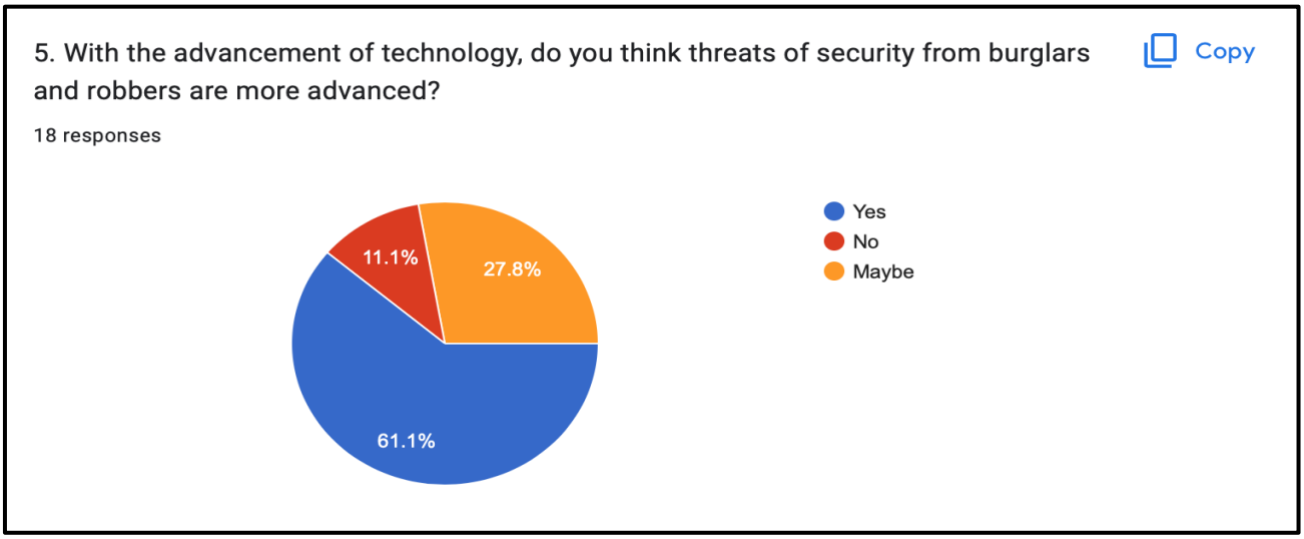


Figure 13: Survey result 5

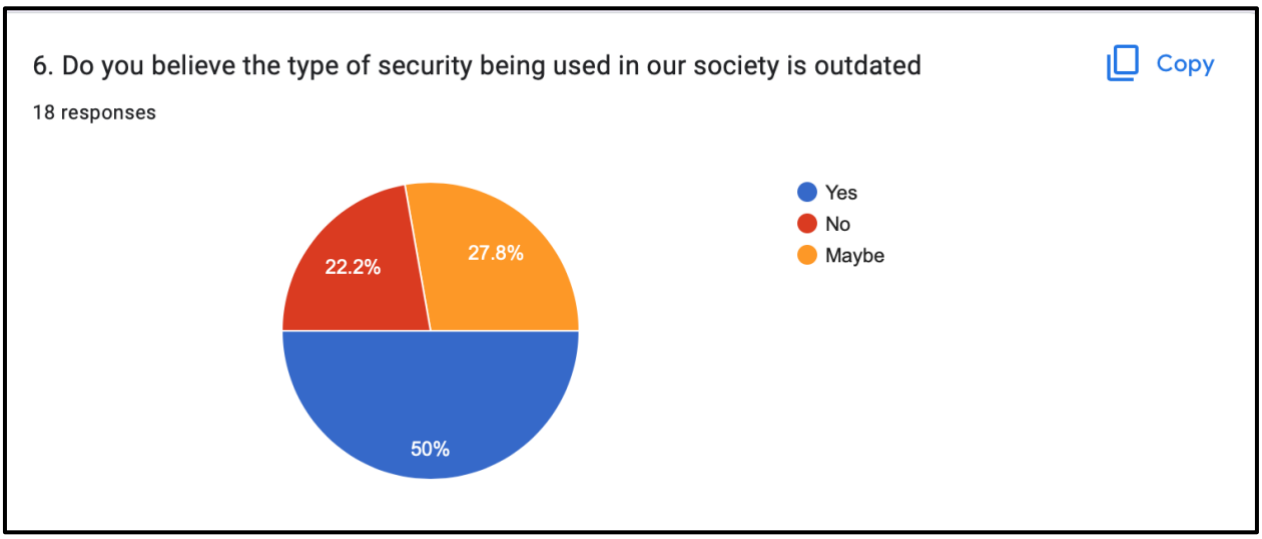


Figure 14: Survey result 6

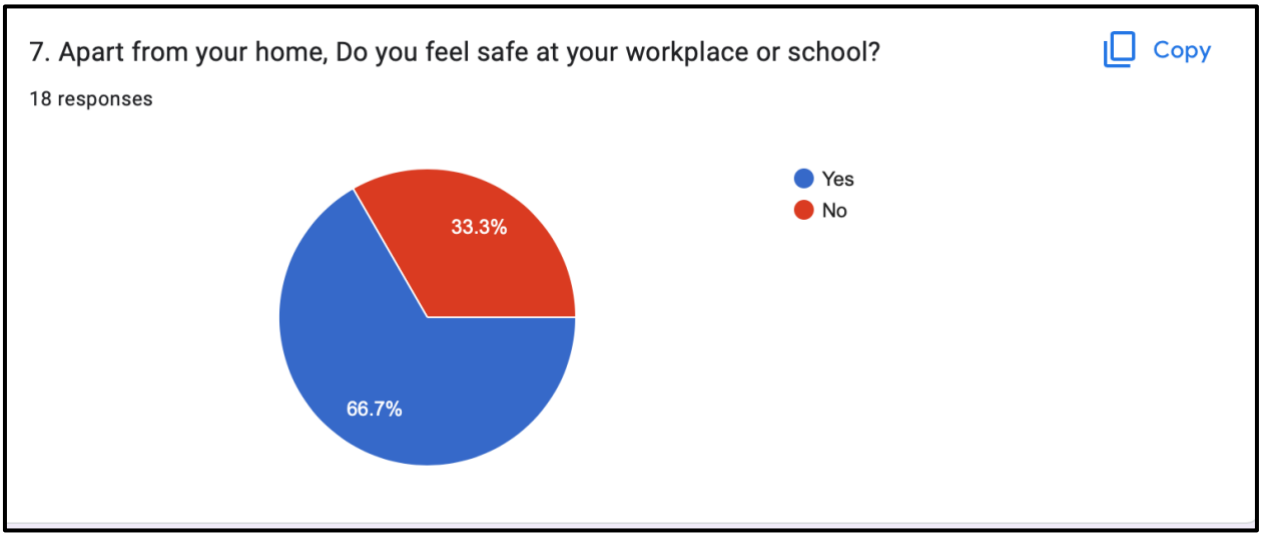


Figure 15: Survey result 7

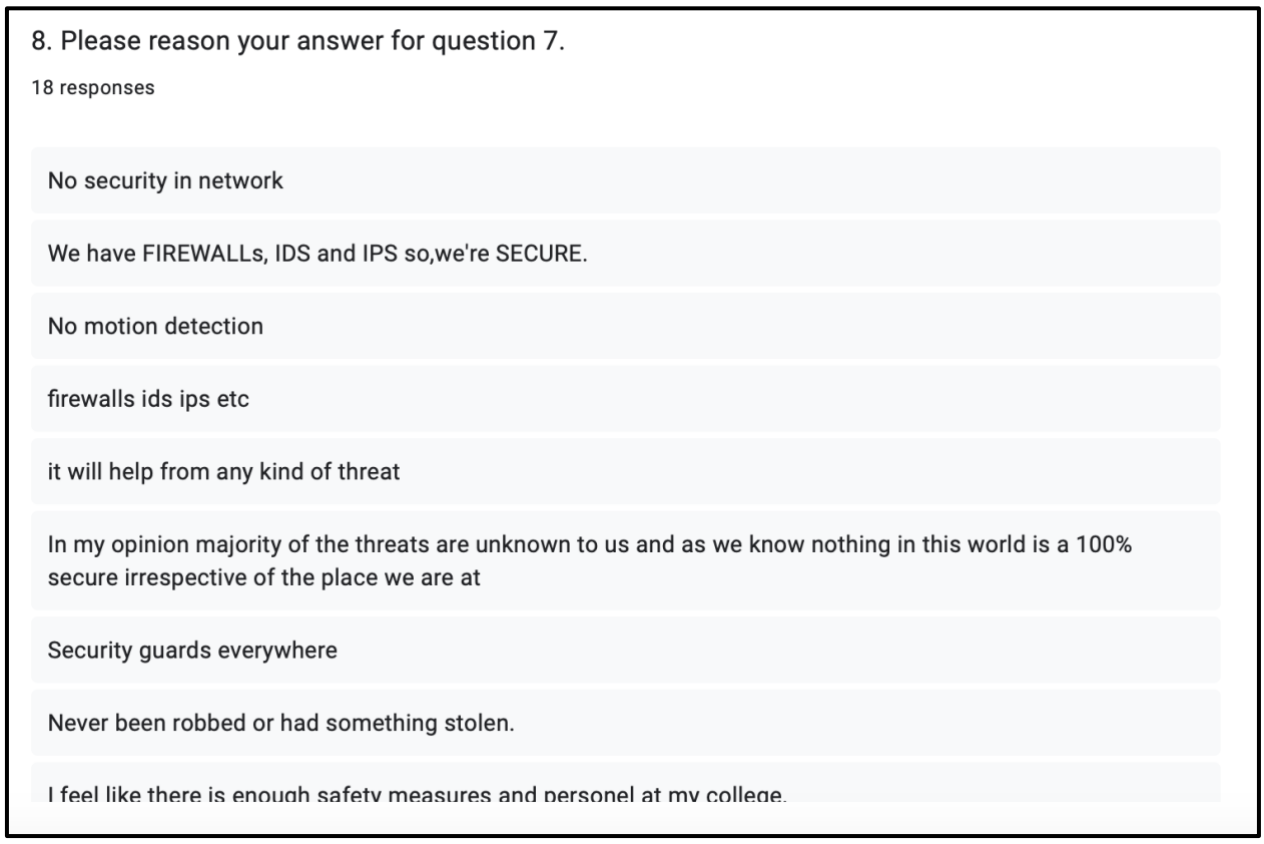


Figure 16: Survey result 8

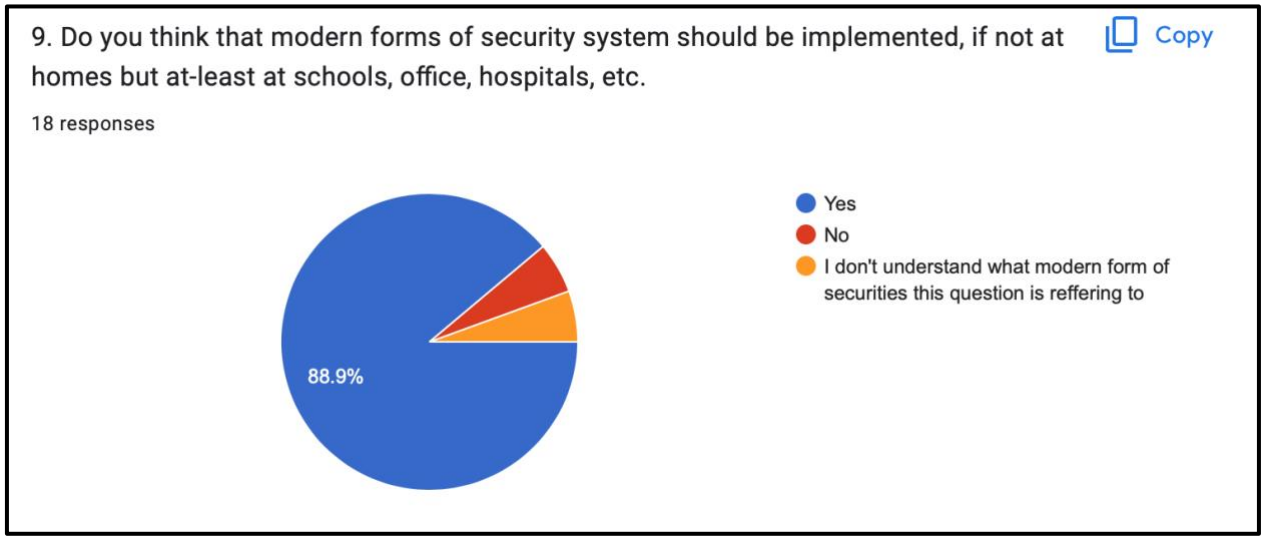


Figure 17: Survey result 9

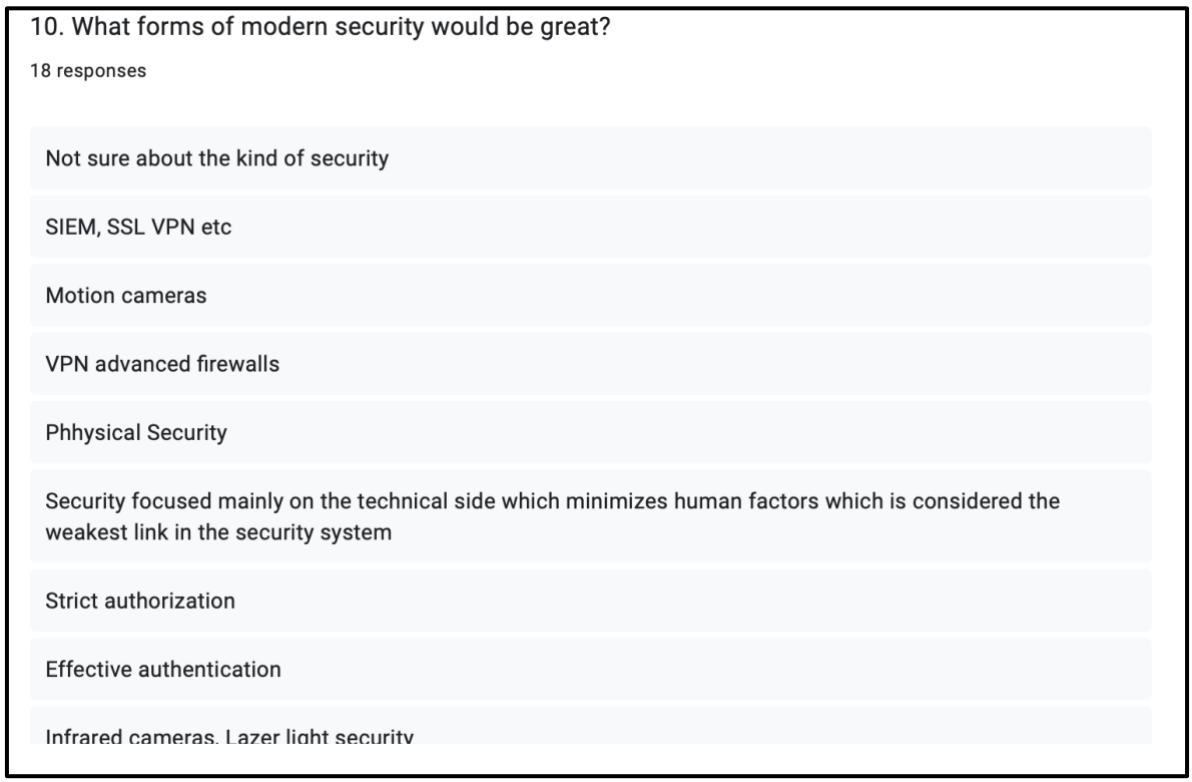


Figure 18: Survey result 10

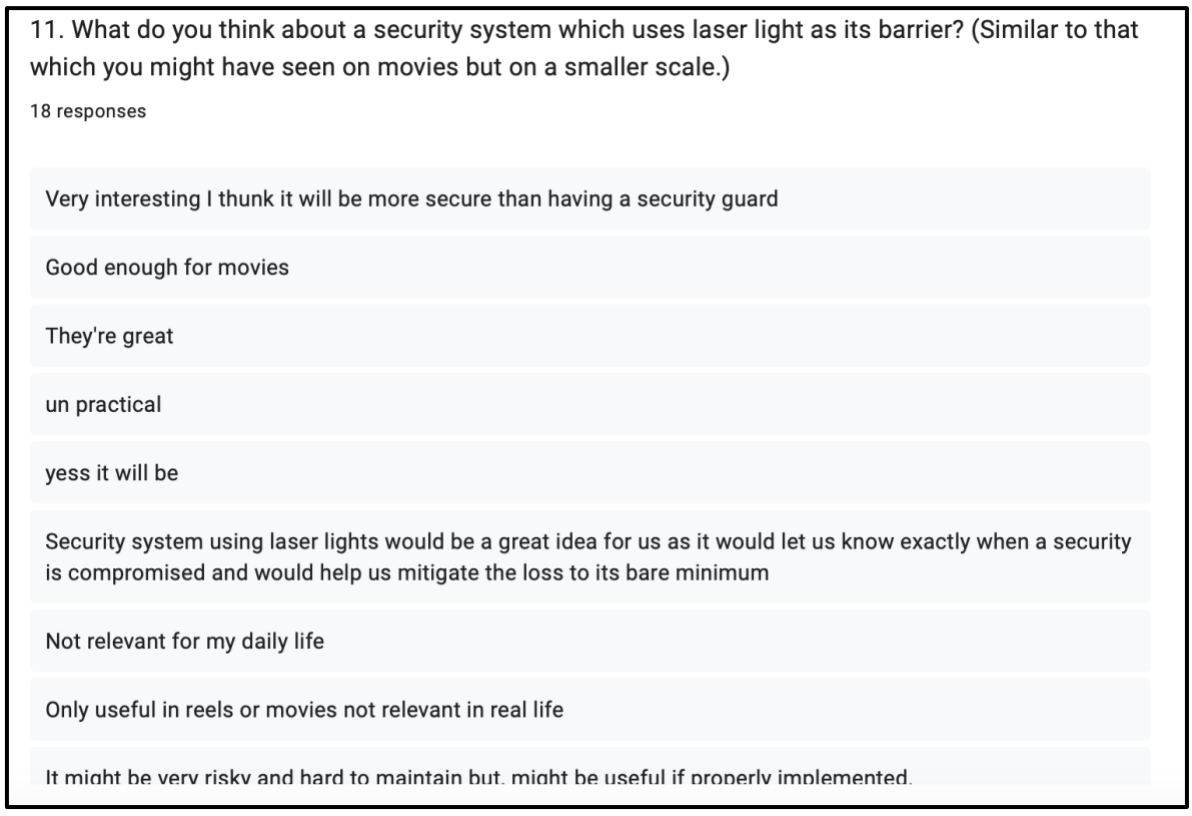


Figure 19: Survey result 11

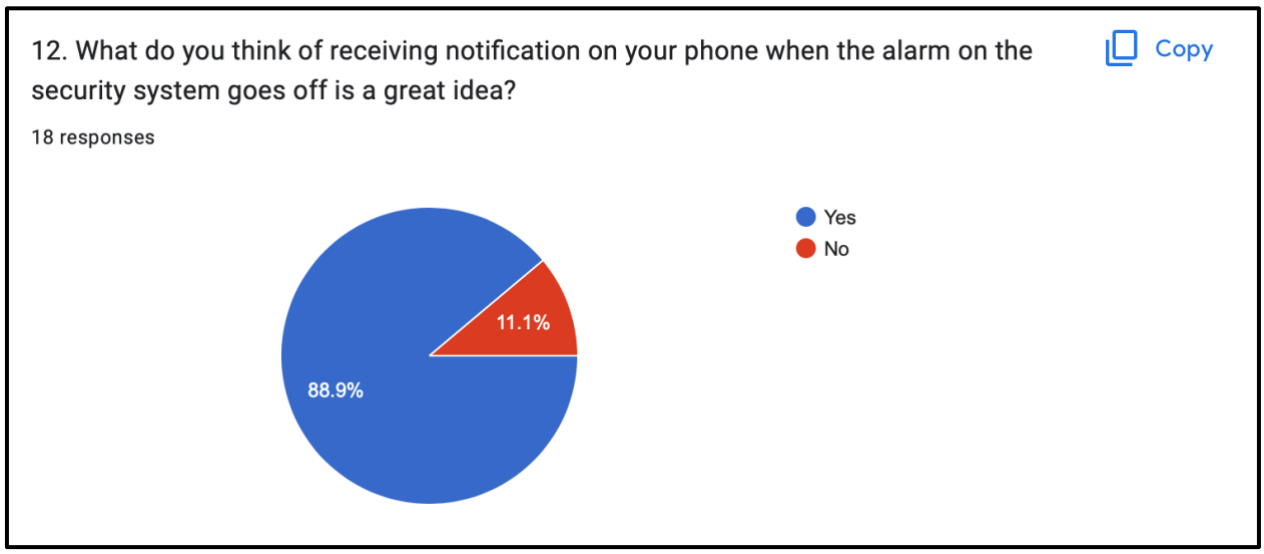


Figure 20: Survey result 12

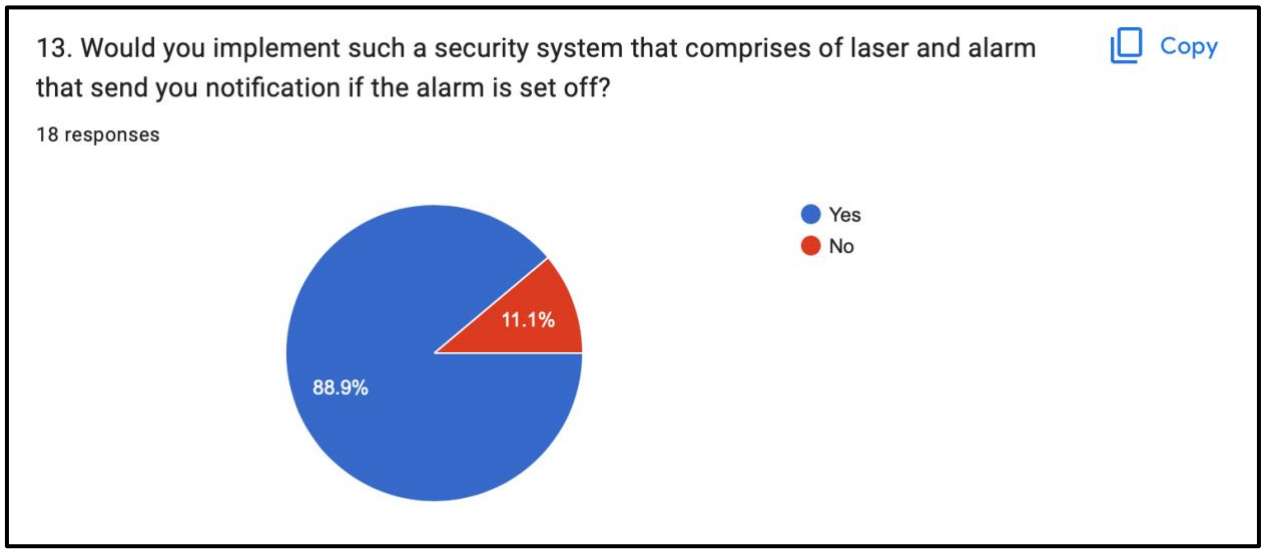


Figure 21: Survey result 13

7.3. Milestone Review

- Milestone 1: Topic Finalization and Research
  Status: Complete
- Milestone 2: Proposal submission
  Status: Complete
- Milestone 3: Client Finalization
  Status: Complete
- Milestone 4: Interim Report
  Status: Complete
- Milestone 5: Complete development of Laser Security system
  Status: In progress
- Milestone 6: Complete development of the alarming and automated alarm notification codes
  Status: Incomplete
- Milestone 7: Finalize the development
  Status: Incomplete
- Milestone 8: Complete testing
  Status: Incomplete
- Milestone 9: Complete documentation
  Status: Incomplete
- Milestone 10: Submit project
  Status: Incomplete

7.4. Development

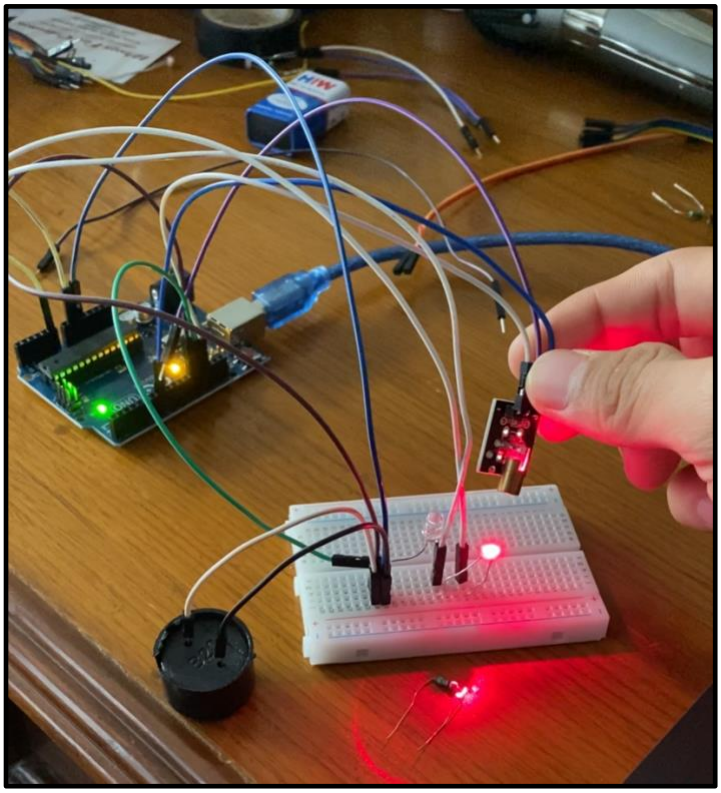


Figure 22: Rough development of an alarm system

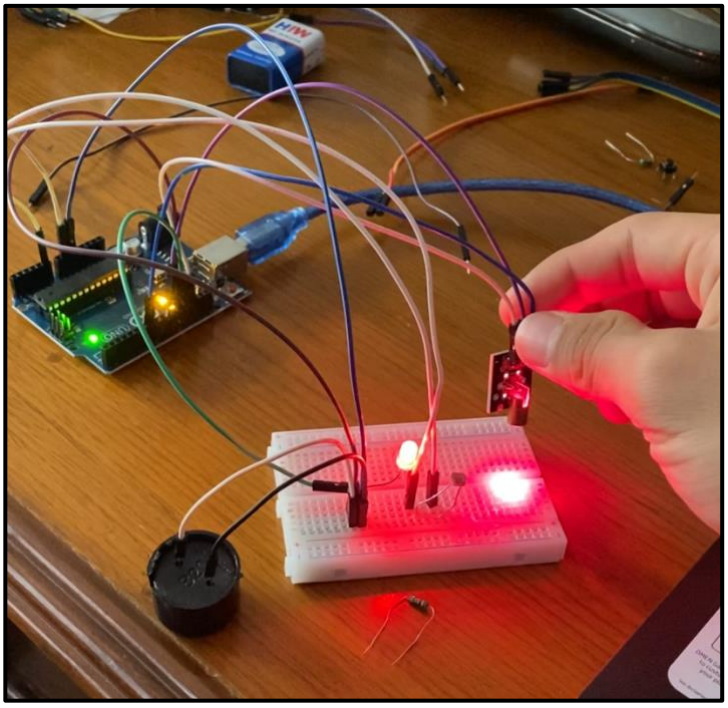


Figure 23: Rough development of an alarm system

In the above picture, it is visible that when the laser hits the LDR, the LED light is off and so is the buzzer. However, in the second picture when the laser is removed from hitting the LDR, the LED light flashes a red color that blinks and the alarm starts ringing too.

Given below is the code for the above mentioned development.

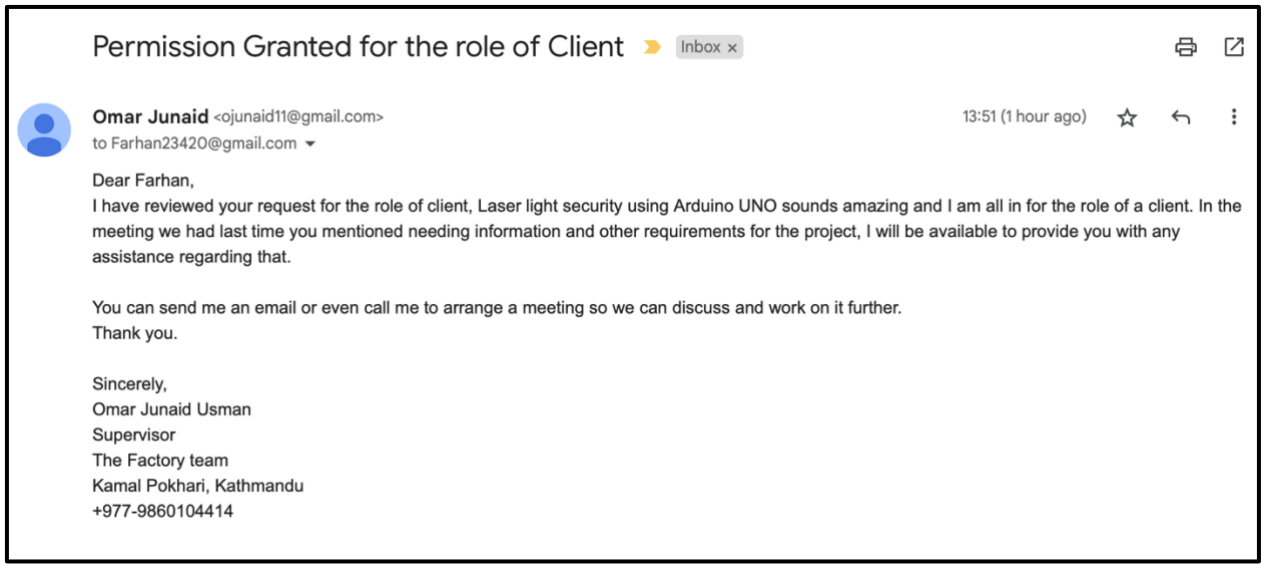
Laser_Alarm

```
const int ledPin = 13;

const int buzzerPin = 12;

const int ldrPin = A0;
const int laserPin = 7;

void setup () {

Serial.begin(9600);

pinMode(ledPin, OUTPUT);

pinMode(buzzerPin, OUTPUT);

pinMode(ldrPin, INPUT);
pinMode( laserPin , OUTPUT);

digitalWrite( laserPin , HIGH);


}

void loop() {



int ldrStatus = analogRead(ldrPin);

if (ldrStatus > 1) {
```

```
if (ldrStatus > 1) {


tone(buzzerPin, 100);

digitalWrite(ledPin, HIGH);

delay(350);

digitalWrite(ledPin, LOW);

delay(100);

Serial.println(" ALARM ACTIVATED ");

}

else {

noTone(buzzerPin);

digitalWrite(ledPin, LOW);

Serial.println("ALARM DEACTIVATED");

}
Serial.println( ldrStatus );
delay(10);
}
```

Figure 24: Development Code for laser alarm system

7.5. Client Approval Letter



Permission Granted for the role of Client Inbox ×

Omar Junaid <ojunaid11@gmail.com> 13:51 (1 hour ago)
to Farhan23420@gmail.com

Dear Farhan,
I have reviewed your request for the role of client, Laser light security using Arduino UNO sounds amazing and I am all in for the role of a client. In the meeting we had last time you mentioned needing information and other requirements for the project, I will be available to provide you with any assistance regarding that.

You can send me an email or even call me to arrange a meeting so we can discuss and work on it further.
Thank you.

Sincerely,
Omar Junaid Usman
Supervisor
The Factory team
Kamal Pokhari, Kathmandu
+977-9860104414

Figure 25: Client Email