# American International University – Bangladesh (AIUB)

## Faculty of Engineering

## Department of CSE, EEE, and CoE

## EEE3102 Digital Logic and Circuits LAB

# PROJECT PROPOSAL FORM

**SEMESTER: SUMMER 2022-2023**

**PROJECT TITLE:** Implementation of Fire Alarm System

**Survey to develop a process for complex engineering problems with a wide range of conflicting requirements (use pie chart):**

Do you think Fire alarm system is essential in our daily life?

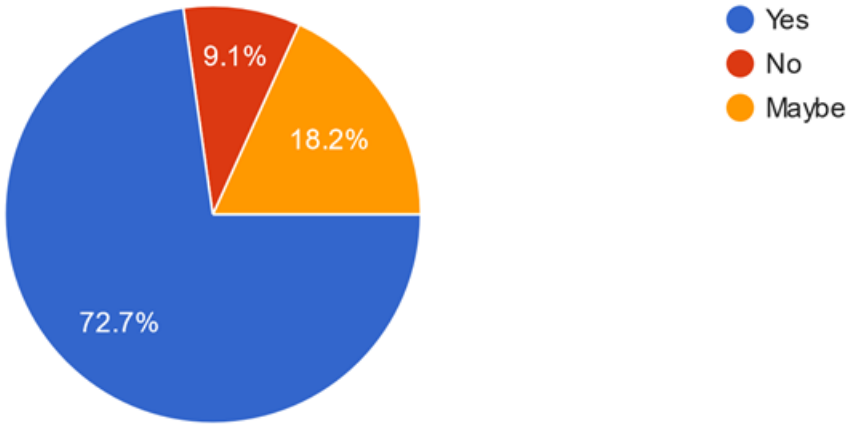


**Figure: 1**

Do you think false detection is hassle?

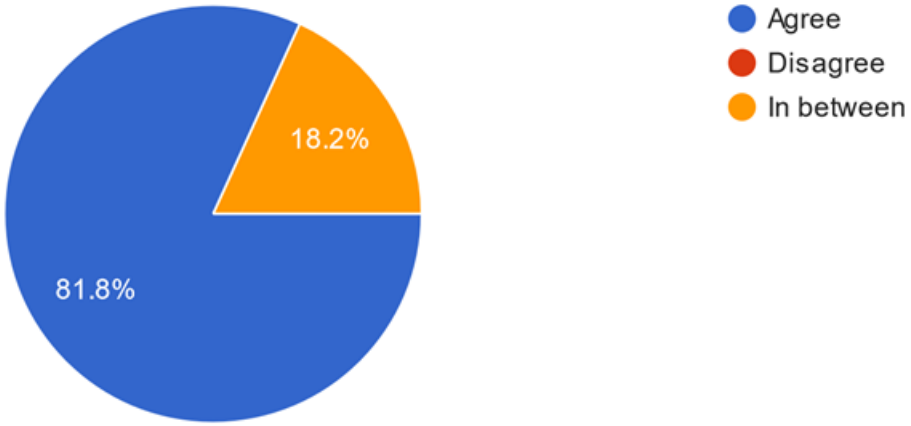


**Figure: 2**

Do you think if we advertise it in marketplace will it be a successful project in terms of number of buyers?

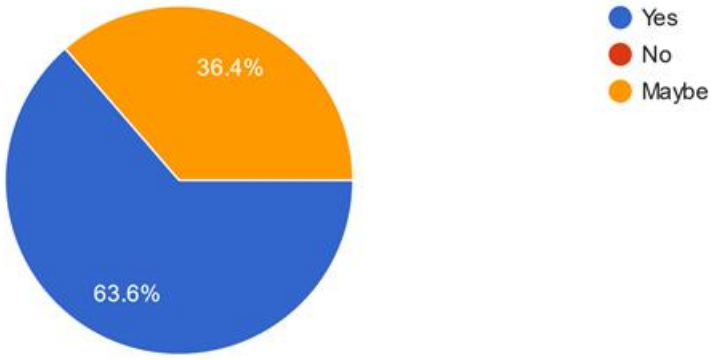


**Figure: 3**

How much do you think people are willing to pay for this fire alarm system?

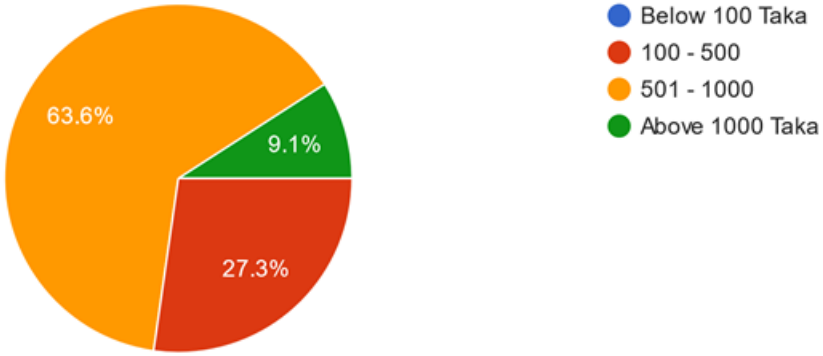


**Figure: 4**

## AIMS AND OBJECTIVES OF THE PROJECT:

The Primary objective of this project are:

- Implementing a reliable fire alarm system that can detect fires accurately and in a timely manner.
- Developing an effective alert system to quickly notify occupants about fire incidents.
- Establishing a seamless integration with emergency services, such as the fire department, to enable rapid response and assistance.
- Ensuring compliance with relevant fire safety regulations and standards.
- Providing a cost-effective solution that can be tailored to various settings, including residential, commercial, and industrial buildings.

The primary aim for this project is to develop a much more hassle free and more accurate fire alarm system.

## EXPERIMENTAL BLOCK DIAGRAM:

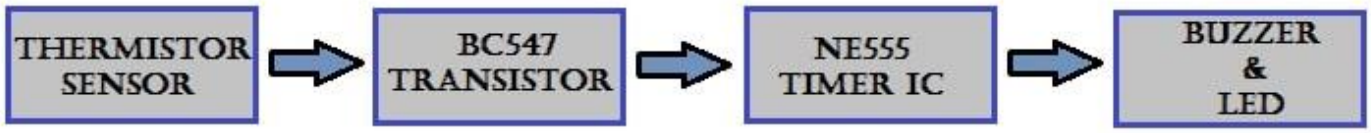


**Figure: 5**

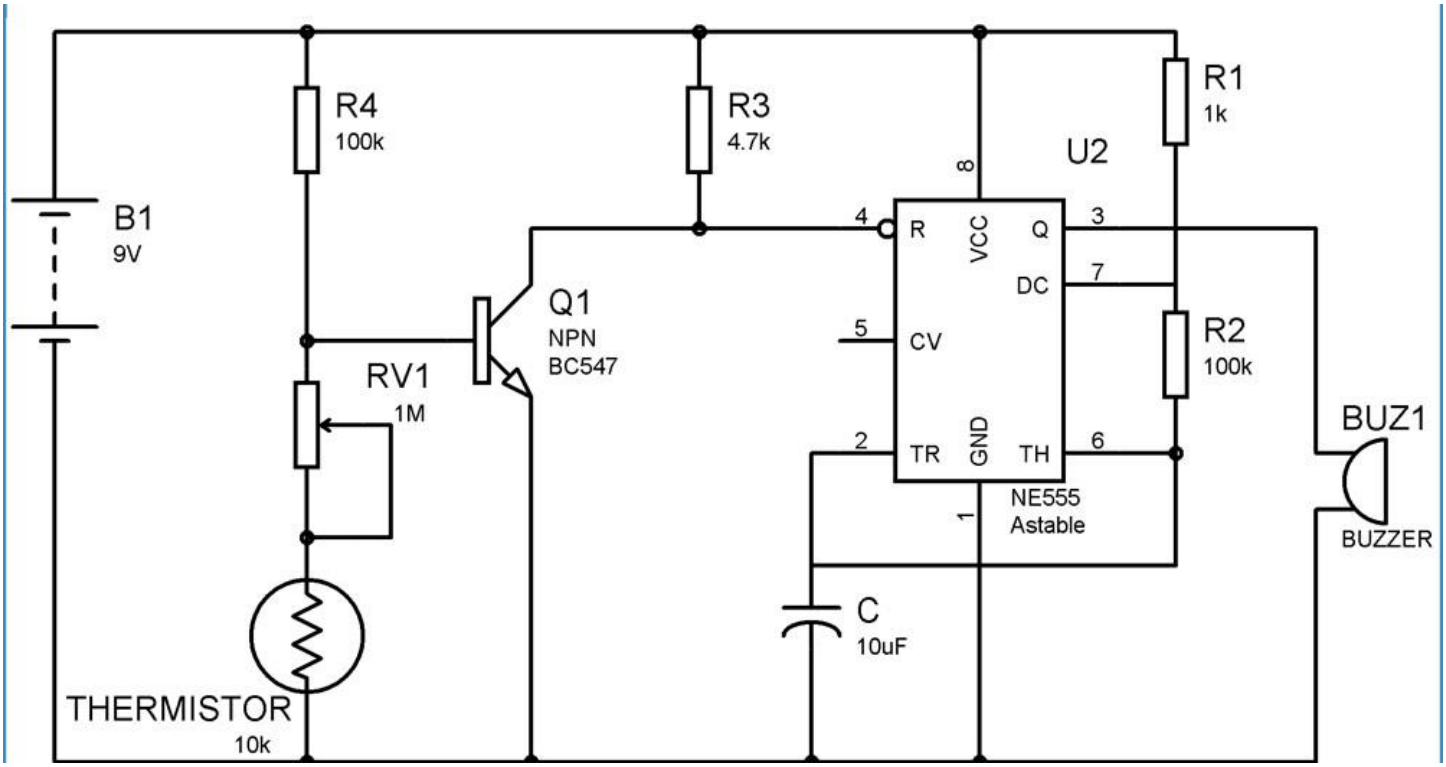


**Figure 6: Circuit Diagram**

## PROJECT TIMELINE (GANTT CHART):

| Task Name | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 |
|---|---|---|---|---|---|
| Planning | | | | | |
| Research | | | | | |
| System Design | | | | | |
| Implementation | | | | | |
| Outcome Analysis | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Report Writing and Follow-up | | | | | | |
| Submission | | | | | | |

## REFERENCES:


[1] S. M. R. Islam and M. J. Hossain, "Gate Level Design of a Digital Clock with Asynchronous-Synchronous Logic," Global Journal of Researches in Engineering, USA, 2012, vol. 12, no, 4, March 2012, pp. 16-22

[2] N. Nandanavanam, "An Imprint of IC 555 Timer in the Contemporary World," International Journal of Engineering and Advanced Technology (IJEAT), India, 2015, vol. 4, no, 6, August 2015, pp. 1-4

[3] C. Haritha, "Digital Stop Watch Using 555 Timer," International Journal of Recent Research in Electrical and Electronics Engineering (IJRREEE), India, 2018, vol. 5, no, 1, March 2018, pp. 19-23

**FACULTY USE ONLY**

## COMMENTS BY THE COURSE TEACHER:

**COURSE TEACHER'S NAME** **COURSE TEACHER'S SIGNATURE** **DATE**

# GROUP MEMBERS

(Maximum 6 students are permitted to carry out a single Project. However, depending on the capability of the students, 4 students may be allowed but not less than that)

| | |
|---|---|
| **NAME**: Ahnaf Abdullah Zayad……<br>**ID**…21-45019-2……<br>**PROGRAM:** EEE/COE/CSE<br>**EMAIL:** | **NAME**: Srabone Raxit……<br>**ID**…21-45038-2……<br>**PROGRAM:** EEE/COE/CSE<br>**EMAIL:** |
| **NAME**: Safkat Khan……<br>**ID**…22-46392-1……<br>**PROGRAM:** EEE/COE/CSE<br>**EMAIL:** | **NAME**:Juhaer Al Mahbub……<br>**ID**…21-44687-1……<br>**PROGRAM:** EEE/COE/CSE<br>**EMAIL:** |
| **NAME**: Imtiaz Mahmud……<br>**ID**…20-43012-1……<br>**PROGRAM:** EEE/COE/CSE<br>**EMAIL:** | **NAME**: ……<br>**ID**……<br>**PROGRAM:** EEE/COE/CSE<br>**EMAIL:** |
| **REMARKS (for OFFICE use only)** | |

### *Course Outcome Mapping with the Course Project Proposal:*

| COs/CLOs | Details | K | P | A | Assessed Program Outcome Indicator | BNQF Indicator | Assessment Techniques |
|---|---|---|---|---|---|---|---|
| CO1 | Apply proper information and concepts of different logic gates, digital ICs, transistors, and timers to implement logical circuits considering a wide range of conflicting requirements. | K3 | P1, P2, P6 | | P.a.3.C3 | FS.1 | Course Project Proposal Form |

| | | | |
|---|---|---|---|
| **Course Name:** | Digital Logic and Circuits Lab | **Course Code:** | EEE 3102 |
| **Semester:** | Summer 2022-2023 | **Section:** | C |
| **Faculty Member:** | Md. Ali Noor | | |

| | |
|---|---|
| **Course Project Title:** | Implementation of Fire alarm System |
| **Project Group No.** | 2 |

| SL | Student ID # | Student Name | Obtained Marks |
|---|---|---|---|
| **1.** | 21-45019-2 | Ahnaf Abdullah Zayad | |
| **2.** | 21-45038-2 | Srabone Raxit | |
| **3.** | 22-46392-1 | Safkat Khan | |
| **4.** | 21-44687-1 | Juhaer Al Mahbub | |
| **5.** | 20-43012-1 | Imtiaz Mahmud | |

### *Assessment Materials and Marks Allocation:*

| COs | Assessment Materials | POIs | Marks |
|---|---|---|---|
| CO1 | Course Project Proposal form | **P.a.3.C3** | 20 |

### *Assessment Rubrics*

| COs-POIs | Excellent [17-20] | Proficient [13-16] | Good [9-12] | Acceptable [5-8] | Unacceptable [1-4] | No Response [0] | Secured Marks |
|---|---|---|---|---|---|---|---|
| **CO1 P.a.3.C3** | The survey developed as a process for complex engineering problems considering a wide range of conflicting requirements and implementation process is clear and challenging for future project implementation. | The survey developed as a process for complex engineering problems considering a wide range of conflicting requirements but the conflicting requirements are less in number and implementation process is clear and challenging for future project implementation. | The survey developed as a process for complex engineering problems considering a wide range of conflicting requirements but the conflicting requirements are less in number and implementation process is not so clear but seems challenging for future project implementation. | The survey developed as a process for complex engineering problems considering a wide range of conflicting requirements but the conflicting requirements are fewer in number and implementation process is not so clear and seems less challenging for future project implementation. | The survey developed as a process for complex engineering problems considering a wide range of conflicting requirements but the conflicting requirements are very few in number and implementation process is not clear at all and seems impractical for future project implementation. | No Response | |
| **Comments** | | | | | | **Total marks (20)** | |