



**American International University – Bangladesh**

Faculty of Engineering

Department of EEE & CoE

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# **MICROPROCESSOR & EMBEDDED SYSTEM PROJECT PROPOSAL FORM**

**SEMESTER: Fall 2021-2022**

**PROJECT TITLE: 2 MARK**

**Survey to develop process for complex engineering problems considering cultural and societal factors(use pie chart): 5 MARKS**

**GOALS AND BENEFITS OF PROJECT: 3 MARKS**

**EXPERIMENTAL BLOCK DIAGRAM: 3 MARKS**

**PROJECT TIMELINE(GANTT CHART): 5 MARKS**

**REFERENCES: (only published paper based references is allowed, don't use you-tube, Wikipedia, any random website for references): 2 marks**

**FOR FACULTY USE ONLY**

**COMMENTS BY COURSE TEACHER:**

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**COURSE TEACHER'S NAME**

**COURSE TEACHER'S SIGNATURE**

**DATE**

# GROUP MEMBERS

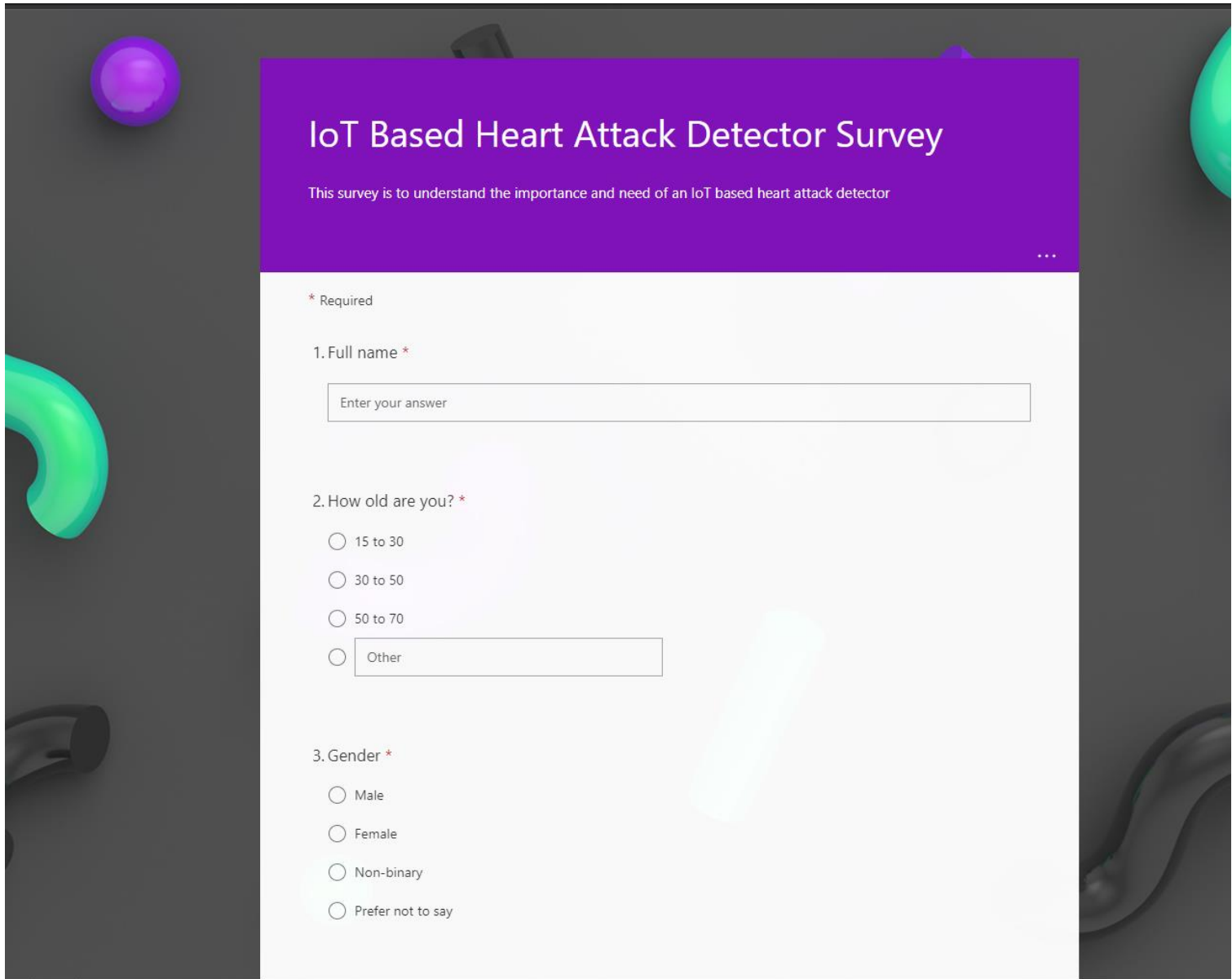
(Maximum 8 students are permitted to carry out a single Project. However, depending on the capability of the students, 5 number of students may be allowed but not less than that)

<b>NAME:</b> Mushfiqur Rahman Abir <b>ID:</b> 20-42738-1 <b>PROGRAM:</b> CSE <b>EMAIL:</b> mushfiqurrohanabir@gmail.com	<b>NAME:</b> Sawon Mursalin <b>ID:</b> 20-42680-1 <b>PROGRAM:</b> CSE <b>EMAIL:</b> mdsawonmursalin@gmail.com
<b>NAME:</b> Suraiya Akter <b>ID:</b> 20-42360-1 <b>PROGRAM:</b> CSE <b>EMAIL:</b> a.suraiya360@gmail.com	<b>NAME:</b> Tasnia Tarannum Elma <b>ID:</b> 20-42686-1 <b>PROGRAM:</b> CSE <b>EMAIL:</b> tasnia.tarannum430@gmail.com
<b>NAME:</b> Al-Jobair Jbna Ataur <b>ID:</b> 20-42707-1 <b>PROGRAM:</b> CSE <b>EMAIL:</b> zubayeremon079@gmail.com	

## PROJECT TITLE

IoT based Heart Attack Detector.

Survey to develop process for complex engineering problems considering cultural and societal factors (use pie chart):

The image shows a digital survey form titled "IoT Based Heart Attack Detector Survey". The form is set against a dark grey background with abstract 3D shapes in purple, green, and black. The survey title is in a large white font on a purple rectangular background. Below the title, a subtitle in a smaller white font states the survey's purpose. The form itself is a white rectangle containing three questions. Question 1 is a text input field for the full name. Question 2 is a radio button selection for age groups, with an "Other" text input field. Question 3 is a radio button selection for gender. A legend for the radio buttons is located to the right of the questions.

**IoT Based Heart Attack Detector Survey**

This survey is to understand the importance and need of an IoT based heart attack detector

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\* Required

1. Full name \*

Enter your answer

2. How old are you? \*

☐ 15 to 30

☐ 30 to 50

☐ 50 to 70

☐ Other

3. Gender \*

☐ Male

☐ Female

☐ Non-binary

☐ Prefer not to say

4. Email address

Enter your answer

5. Do you ever face any kind of Heart problem you or your family member? \*

☐ Yes

☐ No

☐ Maybe

☐ Other

6. Do you need any kind of hard detection system for you and your family? \*

☐ Yes

☐ No

☐ Maybe

7. do you feel if heart attack detection system is in your hand or time it is helpful for you? \*

☐ Yes

☐ No

☐ Maybe

☐ Other

8. At what age do you think a person is most likely to have a heart attack? \*

☐ 20-30

☐ 30-40

☐ 40-60

☐ Other

9. Do you think automatic heart attack detector machine is necessary? \*

☐ Yes

☐ No

☐ Maybe

10. How a smart heart attack detector machine can help you? \*

☐ To detect patient Condition

☐ Other

11. What do you think about how this automatically heart attack detector machine can help you? \*

Enter your answer

12. According to you, how likely you think a person is to have a heart attack is based on this time? \*

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Neither likely nor unlikely
- ☐ Somewhat unlikely
- ☐ Very unlikely

13. Do you want to use a smart Detector device that will help you detect your family senior member's heart attack? \*

- ☐ Yes
- ☐ No
- ☐ Maybe

14. How much do you think you need an automatic heart attack detector machine? \*

- ☐ 0 to 30
- ☐ 30 to 60
- ☐ 60 to 100
- ☐ Other

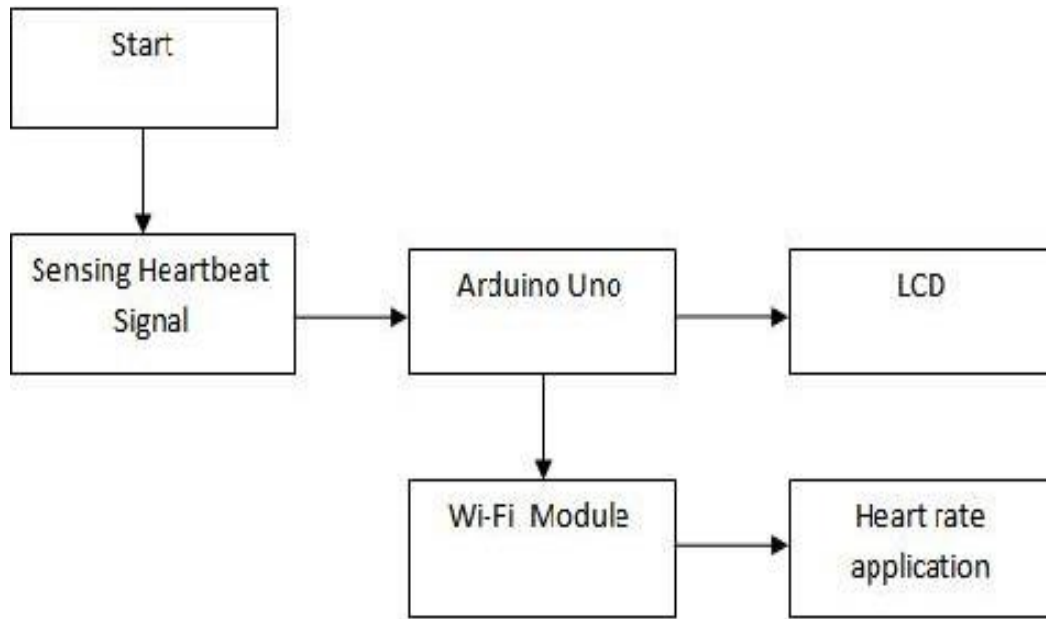
You can print a copy of your answer after you submit

**Submit**

Never give out your password. [Report abuse](#) \*

## GOALS AND BENEFITS OF PROJECT

### EXPERIMENTAL BLOCK DIAGRAM



## REQUIRED EQUIPMENT

### **The Arduino Uno:**

Arduino uno, it is a microcontroller board. It is based on ATmega328. Moreover, there are 14 digital input and output pins of which six can be used as PWM outputs. RX and TX pins are utilized for communication between arduino board, computer or additional devices for serial communication. It has operating voltage of 5V. The ATmega 328 has 32KB of flash memory for storing code. The ICSP (in-circuit serial programming) header will permit us to use an outside programmer to upload software to our microcontroller unit.



**Figure.1. Arduino uno board**

### **Heart Beat Sensor:**

Heartbeat sensor is utilized to quantify the beat rate of heart in digital output. Driven is utilized to distinguish the pulse. The ordinary heartbeat run is 78 bpm. This gives an immediate output digital signal.



**Figure.2. Heart beat sensor**



### NodeMCU ESP 8266:

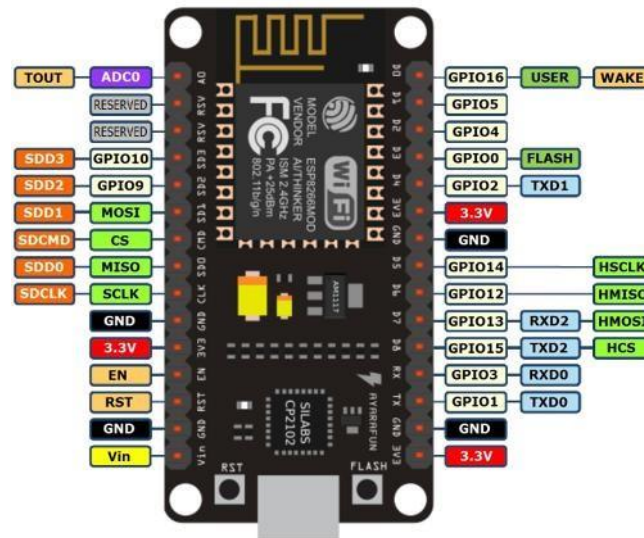


Figure.3. NodeMCU ESP 8266

The Node Microcontroller Unit (NodeMCU) is open-source software and hardware enlargement background that is constructed everywhere a very inexpensive system on a chip named the ESP8266. In our System we have used NodeMCU to receive data from Arduino and send that data over internet.

### LM35 Temperature sensor:

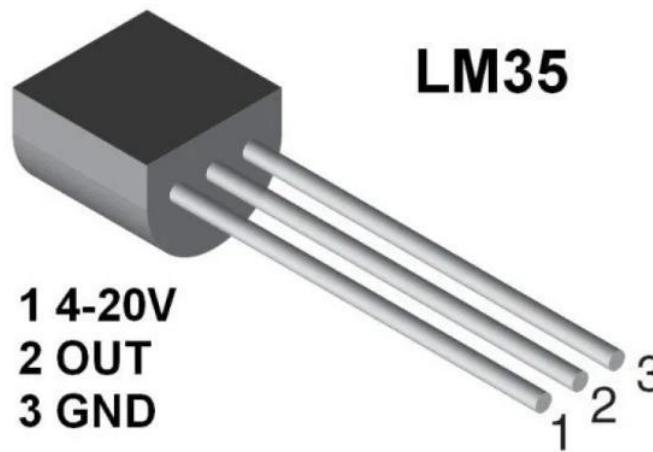


Figure.4. D. LM35 Temperature sensor

**10K Ohm Variable Potentiometer:**

**10K Ohm**



**Results and analysis:**

## PROJECT TIMELINE (GANTT CHART):

Tasks	Schedule
Project Topic selection	Week 1
Discussion about the project topic and make a Website of our project <b>and submission project proposal</b>	Week 2
Conduct background and <b>analysis the problem</b>	Week 3
	Week 4
Specify project planning Method	Week 5
<b>Modify the project</b>	Week 6
	Week 7
<b>Build project</b>	Week 8
	Week 9
	Week 10
<b>Writing project report</b>	Week 11
<b>Project presentation</b>	Week 12

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