

**NATIONAL INSTITUTE OF BUSINESS MANAGEMENT  
HIGHER DIPLOMA IN SOFTWARE ENGINEERING  
COURSEWORK ONE**

**PROPOSAL**

<b>Students Details</b>	
<b>Module Name:</b>	RAD
<b>Name of Lecturer:</b>	Mr. Thilina Soysa
<b>Department:</b>	School of Computing
<b>Submission Due on:</b>	2 <sup>nd</sup> June 2024
<b>Type of Coursework:</b>	Group
<b>Title of the Coursework:</b>	Home Monitoring System



***Students Details:***

	Student No.	Student Name
01	MAHNDSE231F-002	S.R.W. Kumara
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***Date Stamp Required of the Department***

# 01. INTRODUCTION

We, the student of Higher Diploma in Software Engineering National Institute of Business Management, Matara declare that the work entitled “Home Monitoring System” has been successfully completed under the guidance of Consultant/Lecture Mr. Thilina Soysa School of Computing, National Institute of Business Management, Matara. This dissertation work is submitted in partial fulfilment of the requirements for the Robotics course work during the academic year 2024.

# 02. PROBLEM STATEMENT

Home safety and security are important thing for everyone. But there many houses hadn't any system or like it for safety and security and many houses using animals for this subject. It's not an answer for this they can't turn off unnecessary lights, turn on AC, alert about fire, etc... Answer is using Home Monitoring Robot.

This robot can turn off unnecessary lights, detect flame or fire, detect poisoned air or gas leaks, control temperature, and detect motions for take actions.

So, using this system we can measure temperature, detect poisonous Gas leaks, detect fire and detect human motions and give notifications for the admin efficiently.

When we look at the actuations,

- Using DHT11 sensor we can measure temperature if temperature is high we can get instant notification about that.
- If this area that system placed have any fire or flam it can detect using Multi-spectrum infrared sensor and give instant notification to the home owner.
- when nobody is home and if any anonymous person passed this system it can detect it using PIR sensor and give instant notification to the house owner
- Have you worried about your gas leaks no more worries this system can indicate gas leaks of the area using MQ series (mq7) sensor and give instant notification?
- You never want to worry about your home light system. Using this robot it can manage your lights when that area get dark this robot can turn on lights and when it comes to morning this robot can turn off lights using LDR sensor

## Sensors

<b>DHT11 Temperature and Humidity sensor</b>	- Detect temperature
<b>Multi-Spectrum infrared sensor</b>	- Detect flame
<b>PIR sensor</b>	- For detect motions
<b>MQ series (mq7)</b>	- Detect gases
<b>LDR sensor</b>	- Detect lights

### 03. BUDGET

	Items	Quantity	Price per Unit (Rs)
01	Temperature Sensor	1	440
02	Infrared sensor	1	310
03	PIR Sensor	1	100
04	MQ-7 Sensor	1	985
05	LDR Sensor	1	20
06	Arduino Board	1	1575
07	Jump wires set	2	500
08	Push Buttons	5	50
09	Bread Board	1	500
	Estimate Cost		4480

### 04. GANTT CHART

	June				July		
Task	1	2	3	4	1	2	3
Make proposal							
Proposal Submission							
Make presentation							
presentation addressing							
Make video clip							
Present video clip							
Create final report							
Present final report							
Final Presentation and VIVA							