**Project report on**

**Raspberry-Pi powered Intelligent Driver Monitoring System for Detecting Drowsiness and Alert Generation to Prevent Accidents.**

Submitted by

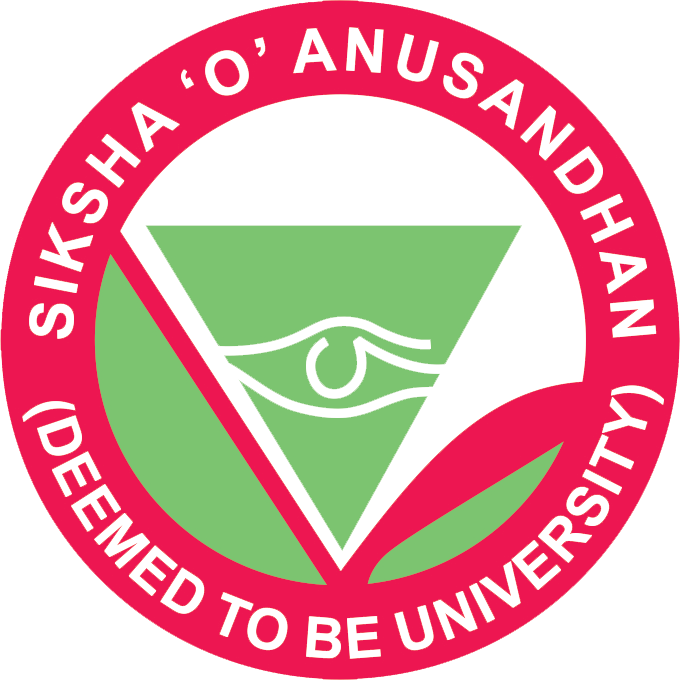
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# Abstract

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# Chapter 01: Introduction

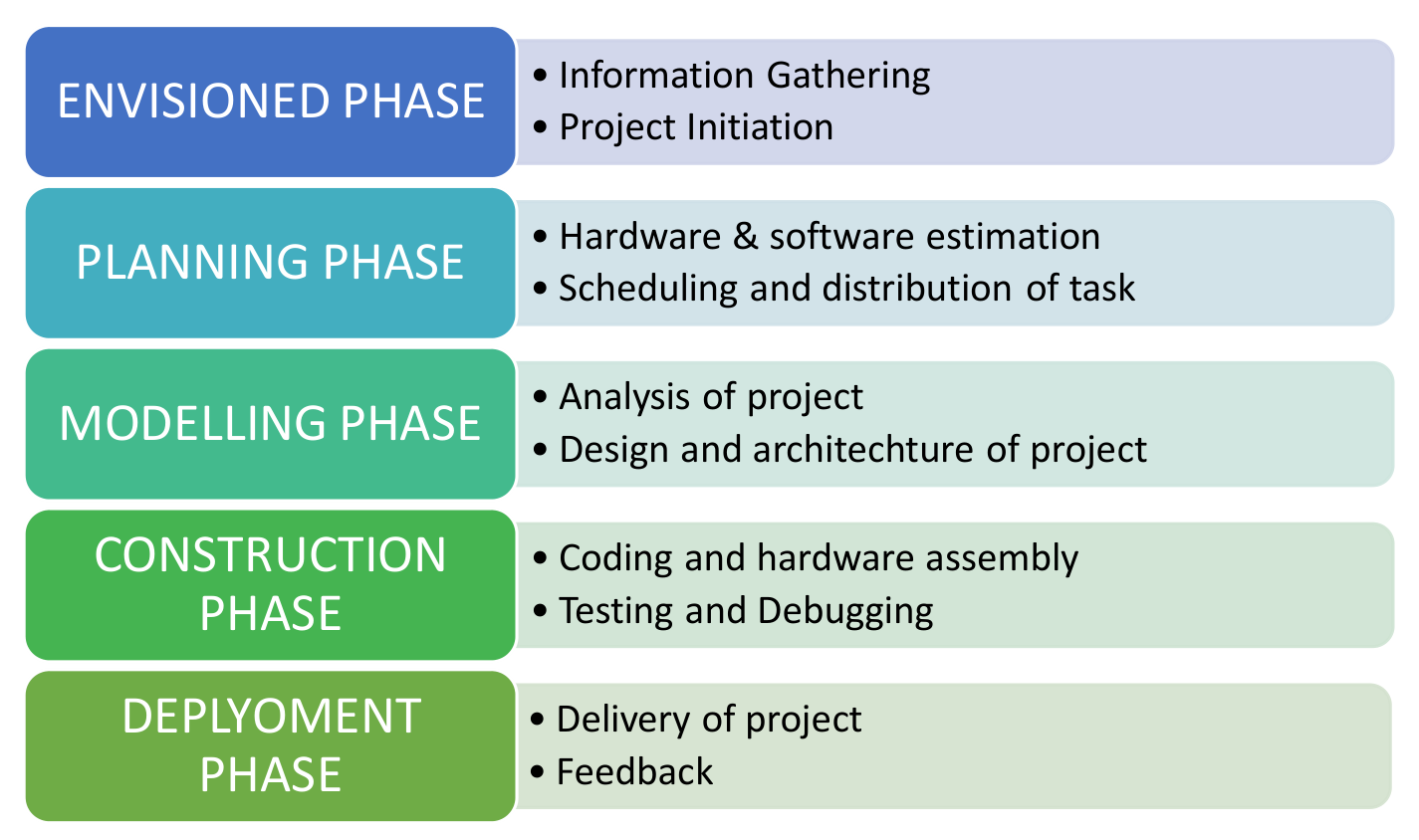
## Introduction

## Background

## Project Objectives

## Scope

## Project Management



**Figure 1. Model of phases in project management.**

## Overview and Benefits

## Organization of the Report

The report is organised into the following chapters. Each chapter is unique on its own and is described with necessary theory to comprehend it.

Chapter 2 deals with background survey and review, Chapter 3 has the description of the theoretical aspects that has been acquired to commence the project work.

# Chapter 02: Background Review & Survey



## Related Works

# Chapter 03: Theoretical Aspects



## Internet of Things (IoT)

## Features of IoT

1. Intelligence
2. Connectivity
3. Dynamic Nature
4. Enormous Scale
5. Sensing
6. Heterogeneity
7. Security

## Advantages of IoT

1. Communication
2. Automation and Control
3. Information
4. Monitoring
5. Efficiency

## Disadvantages of IoT

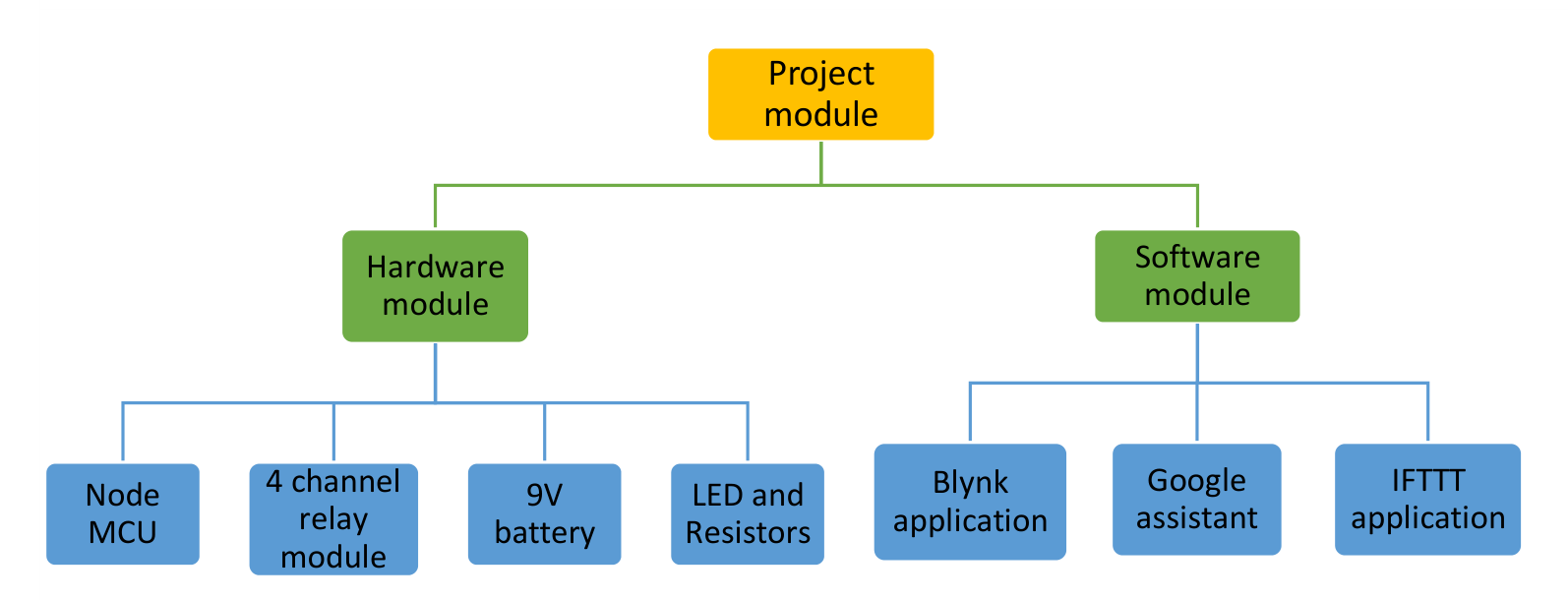
1. Compatibility
2. Complexity
3. Privacy/Security
4. Safety

## Application areas of IoT

## IOT Technologies and Protocols

1. Bluetooth
2. Zigbee
3. Z-Wave
4. Wi-Fi
5. Cellular
6. NFC
7. LoRaWAN

## Project Layout



**Figure 2. Layout of project module**

### Brief Description

# Chapter 04: Hardware Requirements



## Arduino Uno

### Features

### Pin Configuration

## ESP–01

## Sensors

### Pressure Sensor

### Temperature Sensor

## 

## Block diagram of the proposed system

### Working of the system

### Circuit Diagram

### Components Required

**Table 1. Component listing.**

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Component and Specification** | **Quantity** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Chapter 05: Software Requirements



## Arduino IDE (Embedded C / C++)

## Logic and Flowchart

# Chapter 06: Project development & Testing Aspects



## 

# Chapter 07: Conclusion & Future Scope



## Result

## Conclusion

## Limitations

## Further Enhancement and Future Scope

# References

# Appendix 01

## A01.1. Code Listing

## A01.2. Main Code

## A01.3. Libraries

# Appendix 02

## A02.1. Project Proposal Form

The project proposal form was prepared and duly signed from our Faculty-in-Charge Dr. Biswaranjan Swain. The same is attached at the last of this report.

## A02.2. Project Management

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Component** | **Individual Contributions in %** | | **Total** |
| **Name 01** | **Name 02** |  |
|  | Planning |  |  |  |
|  | Background Research and Analysis |  |  |  |
|  | Hardware design |  |  |  |
|  | Software design |  |  |  |
|  | Testing |  |  |  |
|  | Final Assembling |  |  |  |
|  | Project report writing |  |  |  |
|  | Presentation |  |  |  |
|  | Logistics |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## A02.3. Bill of Material

**Table 1. Component listing.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Component** | **Specification** | **Unit Cost** | **Quantity** | **Total** |
|  |  |  |  |  |  |
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|  |  |  |  |  |  |
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|  |  |  |  |  |  |
| **Grand Total** | | | | |  |

# Appendix 03

## A03.1. Data Sheets