# Final Year Design Project
# Proposal Defense Presentation


# SMART WAITER SERVICE ROBOT

## Presented By:


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|---|---|
| **Mohid Aamir** | **663-FET/BSEE/F19** |
| **M. Umair Ashraf** | **659-FET/BSEE/F19** |
| **Osama Nazir** | **657-FET/BSEE/F19** |


## Supervised By:


**Engr. Muhammad Haris Anis, Assistant Professor**

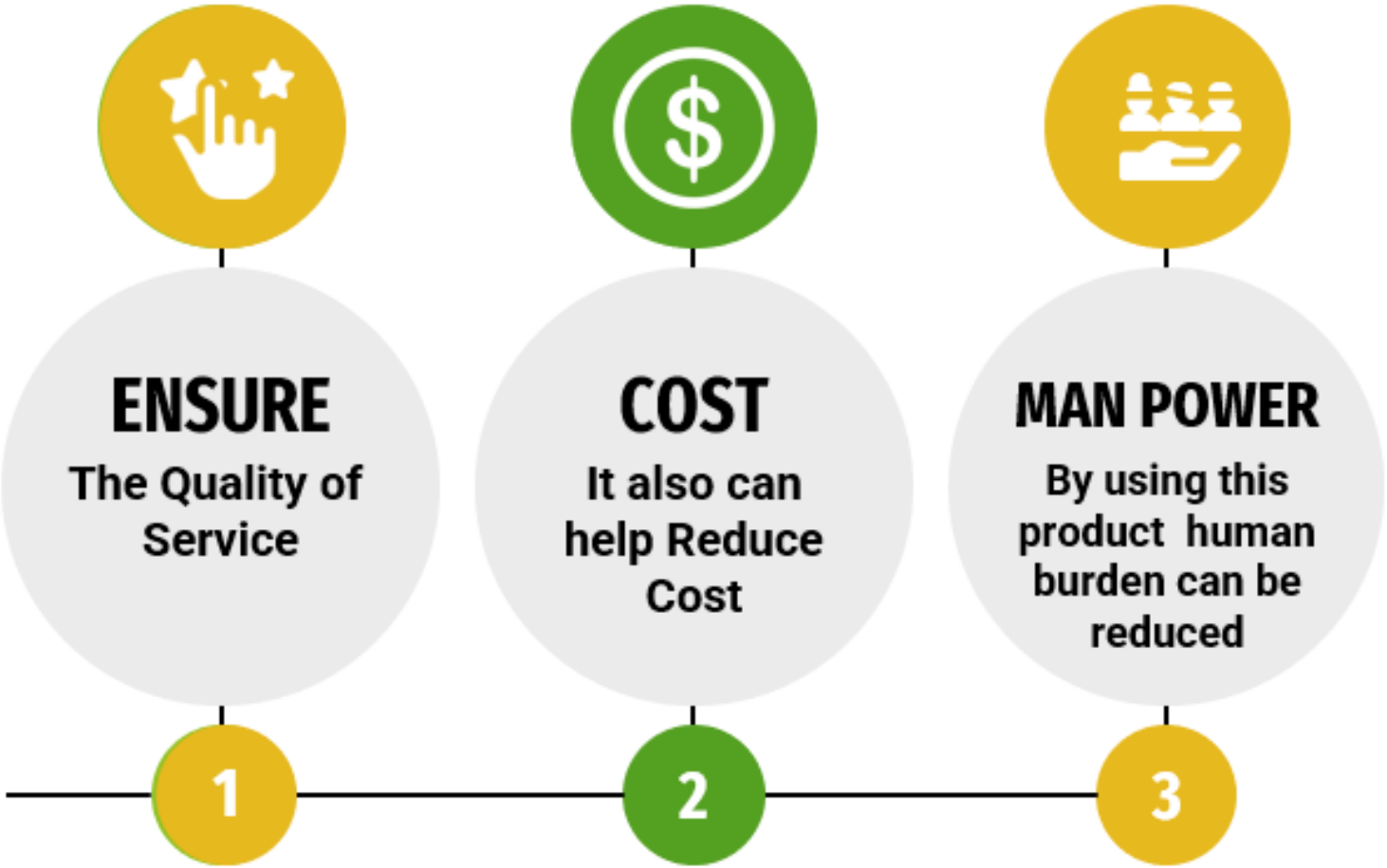
# Presentation Flow

- Introduction
- Problem Statement
- Project objective
- Design Methodology
- Block Diagram
- Hardware Modules
- Application Areas
- Work Division
- Time and cost Analysis
- References

# Introduction

- In modern world, robots are able to carry out every work more effectively and efficiently than a man can do.
- Restaurant Serving System (RSS) framework automates the delivery of food service for restaurants.
- RSS consists of two major parts; first part is based on online food ordering system and second is serving robot.
- Server is used for the communication between customer, manager and kitchen (chef).
- The robot will automatically find the route to the desired table to deliver the food

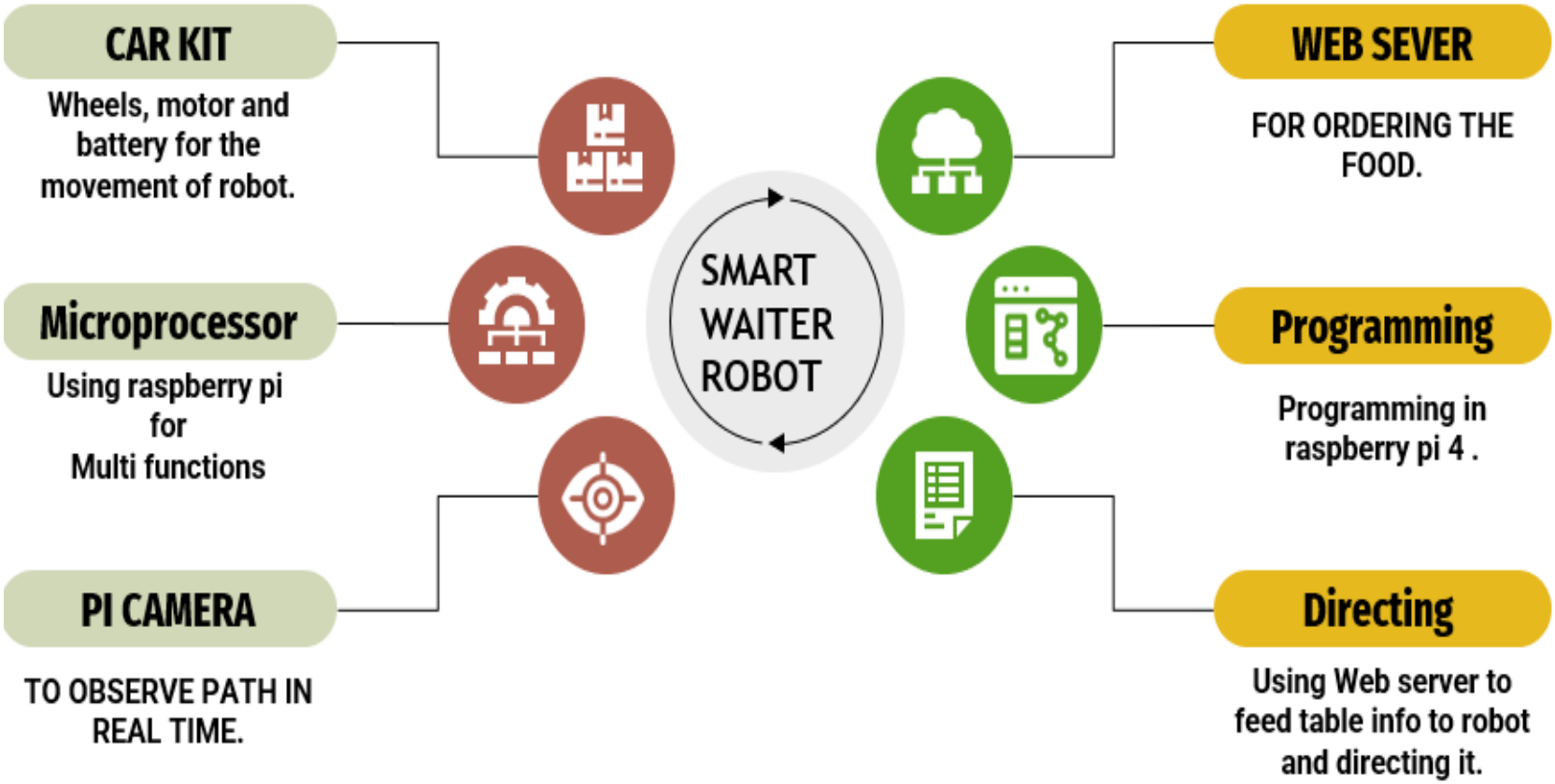
# PROBLEM STATEMENT



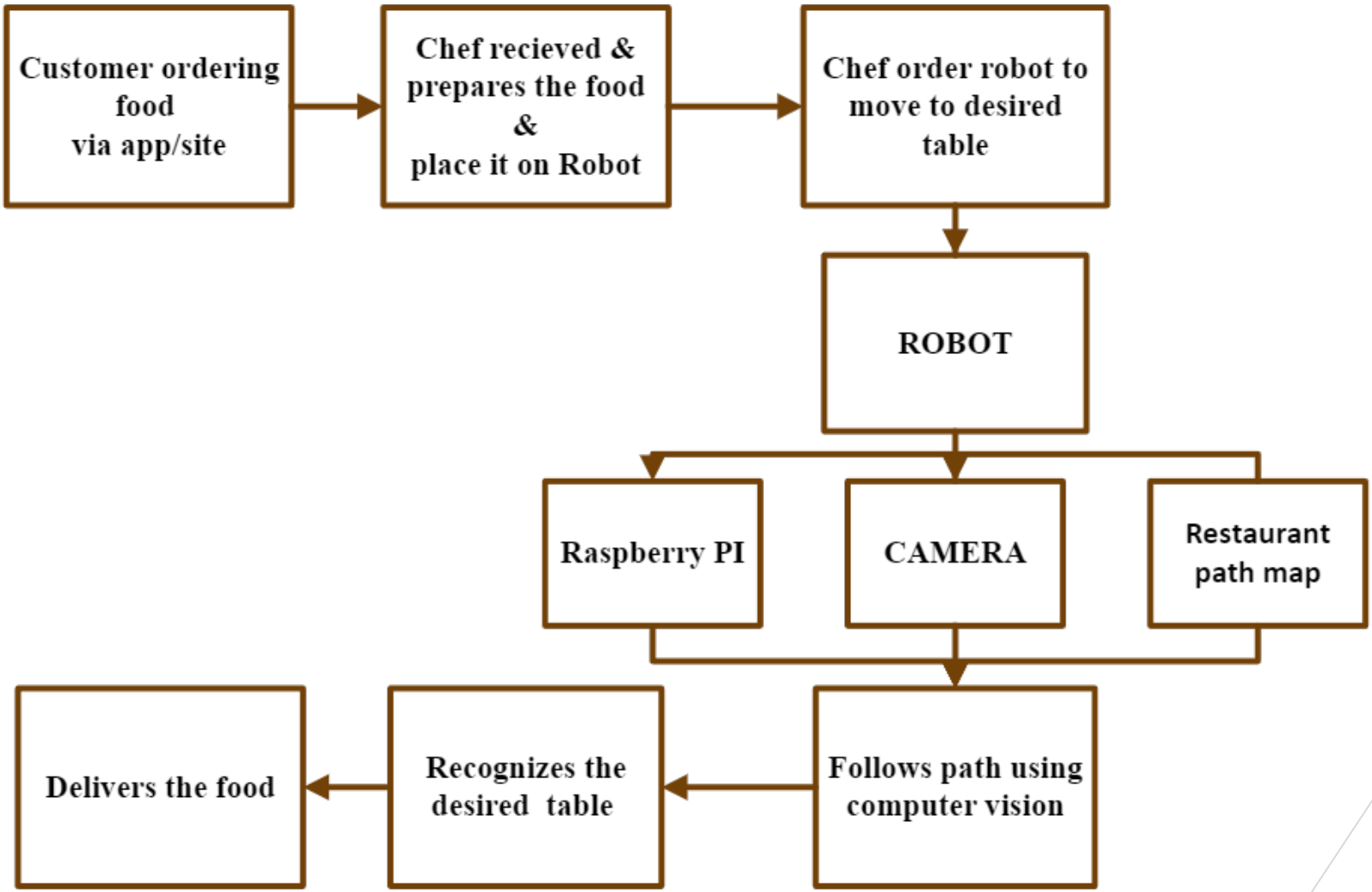
# Objectives

- **Designing a robot that will perform the duties of a waiter in a restaurant.**
- **Ordering Food via App/site.**
- **Directing Robot to move towards desired Location to deliver food.**

# DESIGN METHODOLOGY



# Block Diagram



# Hardware Modules

- **RASPBERRY PI 4: The Raspberry Pi is a single, credit-card-sized computer. Its small size and processing power make it ideal for robotics.**
- **CAR DEVELOPMENT KIT: It includes wheels, motors, and a battery for moving of robot.**
- **Pi camera: It is used for the real-time detection of object detection. In which we use computer vision for detecting our path.**

# Application Areas

- **Catering Services**
- Food Courts in Malls.
- Grocery delivering.
- **Carrying files in offices.**
- **Medicines delivery in Hospitals**
- **Waiter services in Hotels.**
- **Package delivery**
- **Smart assistant Envoy.**

# Work Division

| FYDP | MOHID AAMIR | M. UMAIR ASHRAF | OSAMA NAZIR |
|---|---|---|---|
| Systems Analysis + Requirements | R | R | R |
| Purchasing Equipment's | A | R | A |
| Programming | R | A | A |
| Designing Hardware | R | R | R |
| Product Prototype | A | R | R |
| Final Training and testing | R | A | R |

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# Time Analysis

| Milestone/ Deliverable | Timeline | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | |
| Literature Review | | | | | | | | | | |
| Purchasing and Designing | | | | | | | | | | |
| Designing Software based Scheme | | | | | | | | | | |
| Designing Hardware based Scheme | | | | | | | | | | |
| Developing a Prototype | | | | | | | | | | |
| Final Training and Testing | | | | | | | | | | |

# Cost Analysis

| Item No. | Item Name. | Price (Rs.) |
|---|---|---|
| 1. | Raspberry Pi 4 | 30000 |
| 2. | Camera | 10000 |
| 3. | Car Development Kit | 10000 |
| 4. | Battery and Charger | 5000 |
| 5. | Sensors | 5000 |

# References (1/2)


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# Thank You…

Questions???