**Chapter 1**

**INTRODUCTION**

* 1. **LITRATURE SURVEY**

Medication adherence is a growing concern throughout the healthcare industry with doctors, healthcare systems, and other stakeholders (insurance companies) since the elderly or senior patients’ medication has a big issue of drugs misuse. It is very likely for them to forget to take their pills on time. Especially, those who take multiple medications at the same time. Also, they might take wrong dosage accidentally which may lead to unfortunate consequences such as death. This is a clear proof that it is a widespread problem and clearly related to adverse patient outcomes and higher healthcare costs.

According to a survey it is found that one-fourth of the total elderly population (approximately 26 million people) in India live alone. The United Nations Department of Economic and Social Affairs projected that the elderly population in India is going to rise from 8% in 2015 to 11.5% in 2025 and 19% in 2050.

* 1. **AIM &OBJECTIVE**

he main purpose of SMD system is to help the patients, primarily seniors, take their medications on time in an easy way without the possibility of missing pills. It can also reduce the risk of over or under dosing accidentally. The smart medicine dispenser (SMD) could solve such problems by informing and alerting the patients to take the appropriate dose at the right time.

**The following is description of following chapters:**

* **Chapter 2** provides the necessary theoretical background and specifications about the Microcontroller 8051, Stepper Motor Interface specification and LCD, buzzer, IR Sensor, GSM Module and Bluetooth Module.
* **Chapter 3** gives the detailed information about the schematic diagram, Flow Chart and the software used in this project.
* **Chapter 4** describes the simulation tool used and other softwares utilised. It also describes the testing carried out on hardware and software.
* **Chapter 5** details about the results obtained, conclusions derived and scope for the future expansion of the project.