Software Requirements

The software in this project uses the speech recognition technologies. The skills and knowledge that the designers used in this project are all from the concepts of Software Engineering as well as those needed software components.

Knowledge

The designers applied the knowledge learned from previous courses taken as listed below:

• Software Engineering

Software engineering is the application of engineering to the design, implementation, development, testing and maintenance of software in a systematic method. The knowledge of software engineering was used in the development of the software part of the design.

• System Analysis and Design

System analysis and design is an interdisciplinary part of computer science that involves both system design. It adapts the concept of system development life cycle or SDLC which includes the entire process of planning, building, deploying, updating, and maintaining an information system.

• Python Programming

Python is a widely used high-level, general-purpose, dynamic programming language. Its syntax allows programmers and developers to express concepts in fewer lines of code. The designers used this language to integrate the speech recognition application of the device.

Software Tools

The software tools used to design and program the software application are listed below:

• Proteus Design Suite

Proteus Design Suite was used for PCB production, schematic drawing, placement of components, and routing. Proteus Design Suite was used by the designers as the tool for designing the PCB layouts of the project.

• Python Integrated Development and Learning Environment (IDLE) IDLE is an integrated development environment for Python. It is intended to be a simple IDE and suitable for beginners in an educational environment. The designers used Python IDLE for integrating the speech recognition to the program.

• AutoCAD

AutoCAD is a computer-aided drafting software application used for 2D and 3D designing, sketching, and modeling. The designers used AutoCAD to create the 3D model of the prototype design.