**Ambient assisted living using voice assistant**

Nof Hasson 308499557

Orel Levi 308051358

Matan Dahari 203910765

**Software Requirements Specification** **Document**

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1. **Introduction-** The SRS document present requirements specifications that divide into two main parts. The first one is user requirement specification and the second one is software requirement specification.Both requirement specification can help the development team to manage the scope of work within time and resource.

In our project we will develop a kit of smart power plugs & \*Alexa voice assistant that will be activate by the user’s voice commands and we will control the electrical products.

The name of our project is “Ambient assisted living using voice assistant”. For people with vision disabilities who need help in the residential environment in order to control the electrical products. the main features of the system will be support and lifestyle assistance through remote control and voice commands,improving safety in the use of electrical products and monitoring and learning usage patterns to help improve both safety and electricity consumption.

* “Alexa” - Amazon's intelligent voice recognition and natural language understanding service that allows you to voice-enable any connected device that has a microphone and speaker.

2. **The Overall Description-**

We decided to do a project to help visually impaired people manage their basic lifestyles in the home environment by voice commands in such a way that they would be accessible to them independently. The system will also help them stay safe without fear of using the home products freely.

In addition, the system will enable the display of usage data on these products.

The users of the product need not have any technical knowledge. The client interface in the project should be very convenient and simple. The system should work with a home internet network and of course a wifi router.

Because the user base is a visually impaired population, we want to design a client interface based primarily on smartphone touch actions such as swiping right and left to turn off and turn on and especially voice commands to operate the system. There is currently no GUI requirement but we will provide a simple WEB interface for defining and classifying the electrical products in the initial installation phase.

There is a requirement to produce a cross-platform version but probably in the initial phase the system will only be for android devices and likewise, the voice assistant that will support it in the initial phase will be Amazon's ALEXA but will later expand to support additional voice assistants.

Unlike other smart outlets that mainly deal with turning off and on, our project focuses on making the home environment accessible to users with

disabilities by using voice commands as well as a mechanism

that learns usage patterns and helps in safer use and more

economical use of electricity.

3. **Specific Requirements-**

* ***3.1 Functional requirements:***

- The system shall be very easy to use and operational for the users.

- The system shall be fully activated by using voice commands.

- The system should be safe to use for blind people.

- The system should get back into action and reboot itself in the event of a

- media failure or power failure.

*-* The system will create usage templates by analyzing its operations at each stage.

* **3.2 Non-Functional requirements:**
* The system should be secure and will not allow access to external users.
* The System planning & production will not exceed the $150 budget.
* The system shall be portable from place to place.
* The product shall be aesthetically pleasing and elegant and fit into the home space.
* The system shall be intended for users who do not speak English fluently.