

Your name:

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# Welcome to the beginning of Activity 1

Indicate the time right now (hh:mm):

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# AutomaGREat Project

AutomaGREat proposes an intelligent environment for the Seminar Room of the GREat lab. In the seminar room, lectures, weekly meetings, defenses and other activities happen. Several objects in this room are handled by the group employees who are using the room, such as air conditioners and lights. In this scenario, a development team proposed the AutomaGreat project, in which the goal is to create an application to facilitate the use of room devices: air conditioners and lamps. Thus, users can manipulate these objects remotely through a mobile application. In addition, the system can automate tasks commonly performed in this environment.

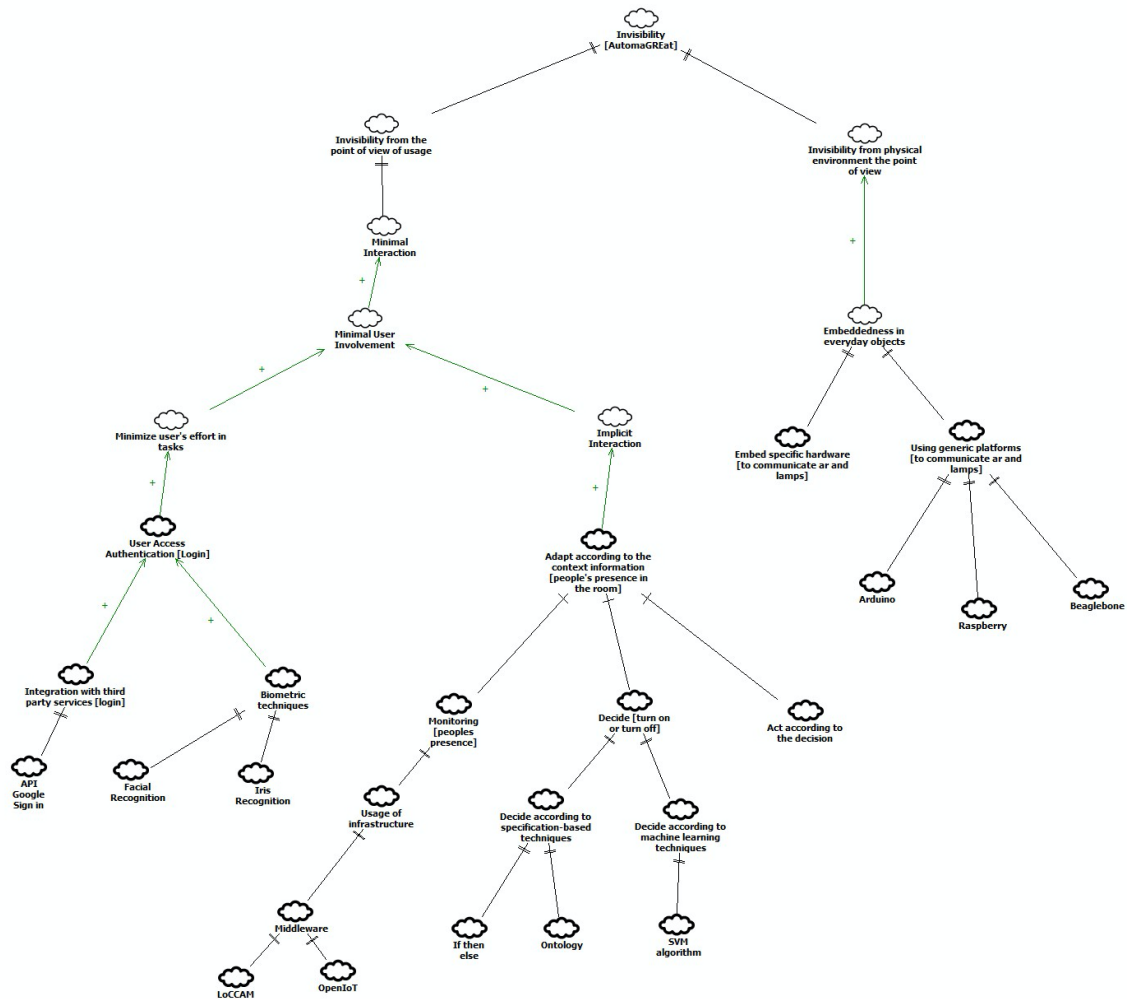
The **functional requirements** of this application are:

- The system must allow user authentication
- The system should allow the user to set their preferences regarding air conditioning and lights
- The system must allow the user to configure the system operation mode: manual or automatic
- Manual mode should allow air and light control directly by the user
  - The system must allow the user to turn on the seminar room air conditioner
  - The system must allow the user to turn off the seminar room air conditioner
  - The system must allow the user to change the seminar room air conditioner temperature
  - The system must allow the user to turn on the seminar room lights
  - The system shall allow the user to turn off seminar room lights
  - The system shall allow the brightness of the seminar room to be manipulated
  - The system must allow the color of the seminar room lights to be changed
- Automatic mode should allow air conditioners and lamps to be triggered from room presence detection and user preferences

The **non-functional requirements** of this application are:

- Invisibility: refers to merging technology into the user's physical environment or decreasing the interaction workload.
- Security: degree to which a product or system protects information and data so that people or other products or systems have the degree of access to data appropriate to their types and levels of authorization.
- Performance: performance against the amount of resources used under established conditions.
- Interaction Efficiency: resources spent on the accuracy and completeness with which users reach goals.
- Reliability: degree to which a system, product or component performs specified functions under specified conditions for a specified period of time.

# Invisibility SIG for AutomaGREat.



# Description of Operationalizing Softgoals

Operationalizing Softgoals	Definition
API Google Sign-in	API that allows authentication with Google data
Facial Recognition	Technique to identify the user based on their face
Iris Recognition	Technique to identify the user based on their iris
Loccam	Middleware for managing and acquiring context information. It can run on a single device or can be distributed across devices.
OpenIoT	A natural extension for cloud computing implementations, allowing access to IoT-based features, and functions as sensor middleware.
If-then-else	Modeling and implementation of adaptation decisions.
Ontologia	Generic, formal and explicit way to capture and specify domain knowledge with its intrinsic semantics through consensual terminology and formal axioms and constraints. Provide a formal way of representing sensor data, context, and situations in well-structured terminology.
Support Vector Machine (SVM) Algorithm	Supervised learning model that analyzes data used for classification and regression analysis.
Action	Execution of the decision.
Embedded hardware	Acting and sensing specific embedded hardware on objects.
Arduino	Open source electronic platform based on hardware and software.
Raspberry	Small size single card that plugs into a computer monitor or TV and uses a standard keyboard and mouse.
Beaglebone	Low power open source single board computer.

**Task 1:** For each operationalizing softgoal in the last SIG level, check if there is a positive or negative impact to Security, Performance, Interaction Efficiency and Reliability. After that, make an analysis of which operationalizing softgoal maximize the positive impacts and minimize the negative impacts for all the NFRs mentioned above. You can use this space below as a draft for your analysis.

## Correlation Catalog

Strategy	Type	Quality Characteristic
Google Sign-in	HELPS	Efficiency
Google Sign-in	HURTS	Privacy
Google Sign-in	HURTS	Security / Confidentiality
Facial Recognition	HELPS	Usability / Accessibility
Facial Recognition	HURTS	Functional Suitability / Functional Correctness
Facial Recognition	HURTS	Privacy
Facial Recognition	HURTS	Performance Efficiency / Time Behavior
Facial Recognition	HURTS	Efficiency
Facial Recognition	HURTS	Security / Authenticity
Iris Recognition	HELPS	Security
Iris Recognition	HELPS	Usability/Accessibility
Iris Recognition	HURTS	Performance Efficiency / Time Behavior
Iris Recognition	HURTS	Efficiency
OpenIoT	HELPS	Functional Suitability
LoCCAM	HELPS	Functional Suitability
LoCCAM	HURTS	Privacy
LoCCAM	HURTS	Performance Efficiency
LoCCAM	HURTS	Security
LoCCAM	HURTS	Reliability
if then else	HURTS	Context Coverage / Flexibility
if then else	HURTS	Reliability
Ontology	HURTS	Performance Efficiency
Arduino	HURTS	Reliability
Arduino	HURTS	Performance efficiency / capacity
Raspberry	HURTS	Reliability
Raspberry	HURTS	Security
Beaglebone	HURTS	Reliability
Beaglebone	HURTS	Security
Embedded hardware	HELPS	Reliability

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface. The top edge of the paper is slightly irregular, like a torn piece of paper.

# End of Activity 1

Indicate the time right now (hh:mm):

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# Post Task Form

1. I identified the impacts **easily**

Strongly disagree	Partially disagree	I do not agree nor disagree	Partially agree	I totally agree

2. I identified the impacts **quickly**

Strongly disagree	Partially disagree	I do not agree nor disagree	Partially agree	I totally agree

3. I made a decision about the operationalizing softgoals **easily**

Strongly disagree	Partially disagree	I do not agree nor disagree	Partially agree	I totally agree

4. I made a decision about the operationalizing softgoals **quickly**

Strongly disagree	Partially disagree	I do not agree nor disagree	Partially agree	I totally agree

5. Explain here how you decided which operationalizing softgoals to use.

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6. I think that the catalog / document made my decision easier.

Strongly disagree	Partially disagree	I do not agree nor disagree	Partially agree	I totally agree

7. Why?

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8. I recommend the usage of the catalog.

Strongly disagree	Partially disagree	I do not agree nor disagree	Partially agree	I totally agree

9. Why?

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