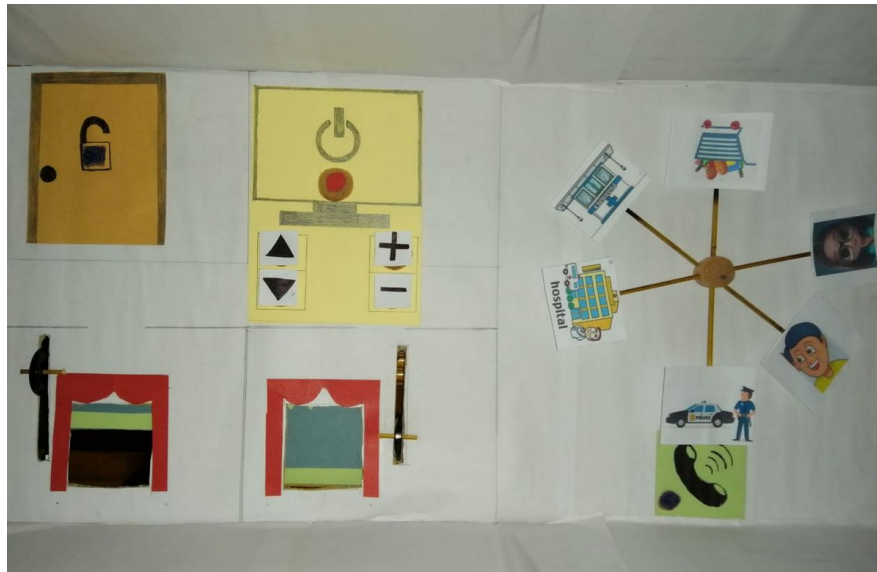# Home Automation Interview

We made these interviews for 4 volunteers from the elderly people with age between [60-73] all the participants are Egyptians with arabic culture because of the situation of COVID-19 we couldn't do more interviews.

1. Interview questions about user characteristic:

1. How old are you?
2. What is your gender?(Man - Woman - etc...)
3. Do you need assistance in order to do your daily chores?
4. What is the level of the needed assistance on a scale of 6?
5. How often do you perform these tasks currently:
   How often to you open/close the blinds per day?
   How often do you turn the TV on and off per day?
   How do you currently perform these tasks?

This scale is graduated from 1 to 6, 6 represents independent persons for everyday life activities and 1 represents dependent persons with cognitive, physical, social, significant problems requiring continued assistance.

Volunteer	Age	type	Need assistance	Level needed [1-6]
1	60	women	yes	4 [Health problems]
2	65	men	yes	3 [Health problems]
3	73	men	yes	5 [Most time in bed]
4	71	women	yes	6 [Physical disability]

Volunteer	Level needed assistance [1-6]	Description of the problem
1	4 [Health problems]	Suffering from a problem with her legs due to her extra weight and when doing a few tasks she cannot do more and needs rest.
2	3 [Health problems]	Suffering from a problem with his legs and breathing so he doesn't do a lot of tasks and at the end of the day he feels tired and can't do things.
3	5 [Most time in bed]	Suffering from the back and legs problem which affected his moving and only walks to do very important things. He cannot walk without a stick.
4	6 [Physical disability]	Suffering from paraplegia in the lower part of the body only, that impedes her movement completely, and she is unable to move without a wheelchair.

How often do you perform these tasks ?

TV	blinds	door	call
2-3	3-4	more than 10	8-10
5-7	2-3	5-7	2-4
2	2	2-4	3-5
3	2-4	2-5	4-6

How do you currently perform these tasks ?

TV	blinds	door	call
Go to the TV to open and close it	Go to the blinds when open and close it	Go to the door and open the lock of it	Search for the number in my phone then call it
First i go to the TV to connect the Electric socket then i open it.	Go to the blinds to open and close it.	Go to the door to open and close it	My son made to me some special numbers [1, 2] related to the interested person to call it directly.
Ask for help from my son to open it and sometimes I do it.	Ask my son to open it .	Normally i didn't open it by myself	Search for the number in my phone then call it
Most of time the TV working just i use the remote control and in case happen any issue i ask my daughter to open it	Ask my children to do this	I have electronic lock with the button beside me	Search for the number in my phone then call it

2. Interview questions about Model intuitivity

1. Could you tell me what the possible meaning of the icons on the panel?
2. Would you want to do daily jobs with this interface? Eg. TV, blinds,Why?
3. How often would you use this interface compared to the current way you close the blinds do your daily jobs? Why? (give some examples here, TV, blinds, windows, etc.)
4. How often do you move from one room to another in your home?
5. Would you take this model with you when you move from one room to another one? Why (not)? (to evaluate portability)

Volunteer	Q1	Q2	Q3	Q4	Q5
1	TV, Open door, open, close blinds, make call	yes, Provides comfort, lack of movement and ease of use	the same number for normal because i usually do the same thing every day	4-6	I would like if the size of it smaller than this
2	TV, Open door, open, close blinds, make call	yes, it will be more easier in some tasks	I think in the beginning less than the normal I need time to get used to his presence in my life	2-4	Yes,I am not move more between the room and when do this i stay in the room for more time in my day
3	TV, Open door, open, close blinds, make call	yes, it help me to do this tasks without moving alot	more than normal because i will control on this much easier	1-2	No,I prefer that put it beside me in the bed
4	TV, Open door, open, close blinds, make call	yes, it will help me to do this tasks without needed to help from anyone	more than the normal because no depend on anyone	0	No,I am not out from the room

3. Interview questions after explaining the description.

1. How can you use this model to do this functionality(and we specify the functionality: to control the TV, Contacts, Blinds)?(to evaluate Model complexity to the user)
2. Will you be comfortable to use this model in front of other people?(to evaluate acceptability)
3. How frequently will you use this interaction or that? (to evaluate useability)
4. Can you list the advantages and disadvantages?
5. Can you please comment on the difficulty of usage?(any pain or issues?)

Q	Volunteer #1	
1	TV and door using press the button for the blinds using scroll down to close and up to open and for the call first determine the thing based the images then Direct it to the button and press on the call button.	
2	Yes, No problem,it will help me more.	
3	Based on the needs of every day.	
4	**Adv:** Saving effort and time, accessing services faster, easy of use.	**Dis_adv:** i need to carry it if i move and need it .
5	No difficulty, just the point of carrying it.	

Q	Volunteer #2	
1	Press the button to open and close the door and TV and for blinds use the scroll bar up and down to open and close it for the calling should move the image of the thing which i need to the call button then press on it.	
2	Yes, it will be useful.	
3	It will be equal until I get used to having it and using it.	
4	**Adv:** understandable, easy to use and save effort.	**Dis_adv:** The size of the model and Not cover more functionality.
5	NO difficulty or pain to using it.	

Q	Volunteer #3
1	To open the door i will press the button and for the TV also and use the + button to increase the sound and - to decrease it and for blinds use this scroll (UP/Down) finally to the call choose the image and move it to call button and press the button.
2	Yes, I didn't see any problem with this.
3	I use this model more because it gathers the functions in one model.

Q	Volunteer #3	
4	**Adv:** Save effort, easy to use, gathering the functions in one model and one place.	**Dis_adv:** the limitation of functions in the model, I would like if there more like [Light off/on].

Q	Volunteer #3
5	It will be difficult if the model not install beside me in the bed

Q	Volunteer #4
1	The door and TV using a press button and for blinds use scroll bar and for the call it is work using winding the image until the button the press to call.
2	Yes, Sure because I use things that look like this model for the door.
3	I will completely depend on it to make these tasks in my day.

Q	Volunteer #4	
4	**Adv:** Simple and contains most of my useful functions for my day and easy to use it.	**Dis_adv:** The wheel of the calling was better for me if for each image with a button under it to call the image directly without moving the wheel.

Q	Volunteer #4
5	The difficulty in the wheel of the calling and I prefer also to Install it in the wall beside me in the bed.

Conclusion and Summary:

In this interview we were need to study and evaluate our model for home automation to eldary people based on some metrics [Portability, Acceptability, Usability, Complexity (Easy to use)] we After our studies for the answers form the interviews we noted the following:

1- For Portability, most the elderly people prefer to instal the model in a fixed place like beside the bed.

2- For Acceptability, there was no problem accepting the model and using it in front of the people.

3- For Usability, the model achieves it where all the participants are comfortable to use the model in their daily tasks instead of the normal way.

4- For Model Complexity (Easy to use), all the participants could easily know and determine all the functionality of the model and all agree that the main advantage for the model is that it was easy to use.

In final we get some comments for the model which were:

1- Add more functionality to the model like [Light on / off].

2- The wheel of the calling was better if for each image with a button under it to call the image directly without moving the wheel or just image to the thing and when press on it call it directly.

3- The preference for installing the model in a fixed place, which led to ignoring the problem that would have occurred due to the size of the model.