

Design4All Pilot App

Description

This mobile app is developed by DT&M Group for evaluate evaluate attitude to technology of elderly people.



According to the "Design for all" paradigm, a pilot study is planned, aimed at analysing the human system interaction of the developed interface, in order to gain information on adaptable and adaptive features.

For this purpose, three significant classes of users have been selected in order to have an appropriate users plethora, necessary to characterize the different usability and functionality levels of the interface and identify different design proposals, these are:

- **Cognitive disorders users:** related to memory (indicators: procedural memory, short-term perspective) and Warning (indicators: visuo-spatial deficits, attention difficulties generalized);
- **Sensory impairments users:** related to View (indicators: diabetic retinopathy, cataracts, colour blindness, macular degeneration, glaucoma) and Hearing (indicators: mild or moderate hearing loss);
- **Motor disorder users:** (indicators: manipulation, the ability to make fine movements)

To this end, six key objectives have been identified:

1. Evaluation of the tapping ability compared to size, location and contrast of the icons.
2. Action of pinching skills assessment in relation to size, location, and contrast of the icons.
3. Pinch \& span ability evaluation in relation to size, location, and contrast of the icons.
4. Icons position adequacy assessment.
5. Text adequacy assessment.
6. Scroll on action ability evaluation.

The evaluation of the users' performance will be based on the analysis of:

- Adaptability of the text elements: font, text size, contrast and position of the text;
- Adaptivity of the icons: size, position and contrast;
- Adaptivity of Interface Layout: iconic, textual, hybrid;
- Subjective skills in the use of technology (tap, pinch, pinch span, scroll);
- Appropriateness of features characteristics.

The app is able to monitoring the **user interaction** of the different sessions and

Requirements

- Node/ NPM
- MongoDB

Configuration

The configuration of app is describes in the following steps. The guide is written for OSX System (in particular step 1 and 2).

1. MongoDB Installation (with Homebrew)

Open Terminal and write the command below.

```
brew update
```

```
brew install mongodb
```

For more details see [MondoDB Documentation](#).

2. Install Nodejs

Download the installation package from <https://nodejs.org> and follow the instructions.

3. Download Repo and Nodejs Dependencies

Download the application folder and enter in through terminal application.

```
cd ~/path-to-folder/d4apilot/
```

Install the dependencies of nodejs modules:

```
npm install
```

4. Start server-side application

Open a shell tab in Terminal and Start MongoDB database typing:

```
mongod
```

In another tab start the server application:

```
cd ~/path-to-folder/d4apilot/
```

```
node server.js
```

5. Configure Network Connection

The application is designed with a client-server architecture, so it is important that the server-side application (running on a pc or mac) and the client device (tablet) is in the same wifi network.

For more information see [Apple Documentation](#).

When both physical device are connected to the same network, check the IP Address of server device (looks like xxx.xxx.xxx.xxx).

From the mobile device, go to the web site : `http://xxx.xxx.xxx.xxx:3000` and start to use the application.

Credits

The mobile application is designed by: [Roberta Bevilacqua](#), [Lorenzo Cavalieri](#), [Silvia Ceccacci](#), [Francesca Gullà](#) and developed by [Lorenzo Cavalieri](#).

The application uses [ionic framework](#), with [nodejs](#) and [mongoDB](#) to manage the server-side implementation.

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