Human Computer Interaction Digital Assignment 1

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OUR PROJECT:

The "**Interactive Smart Health Management App**" is about making an interface between the patients and doctors nearby for a better communication and help-in-need. The app helps in locating nearby doctors and tell what does he do (like he is a dentist, neurologist, cardiologist, etc.) and which place he is currently working in (like hospital, own clinic, door-to door (family doctor), etc).We are also trying to make a scope for messaging from patient to the doctor. The patient can put the disease and search for the doctor present nearby who can cure the disease. The doctor can in return view the prescription given by the patient.

The Keyword Level Model (KLM):

The KLM is a practical design tool that can capture and calculate the physical actions a user will have to carry out to complete specific tasks

• Given:

– A task (possibly involving several subtasks)

– The command language of a system

– The motor skill parameter of the user

– The response time parameters

• Predict:

The time an expert user will take to execute the task using the system

– Provided that he or she uses the method without

The Components of KLM:

The KLM is comprised of:

A. Operators
B. Encoding methods
C. Heuristics for the placement of mental **(M)** operators

a) Operators

- **K** Press a key or button
- **P** Point with mouse
- **H** Home hands to keyboard or peripheral device
- **D** Draw line segments
- **M** Mental preparation
- **R** System response

b) Encoding methods

They define how the operators involved in a task are to be written
MK[i] K[p] K[c] K[o] K[n] K[f] K[i] K[g] K[RETURN].
It would be encoded in the short-hand version as **M 8K [ipconfig RETURN].**
This results in a timing of 1.35 8 0.20 2.95 seconds for an average skilled typist.

c) Heuristics for M Operator Placement

• The KLM operators can be placed into one of two groups—physical or cognitive.
• The physical operators are defined by the chosen method of operation, such as clicking an icon or entering a command string.
• The cognitive operators are governed by the set of heuristics
• The KLM was not designed to consider the following:
– Errors
– Learning
– Functionality
– Recall
– Concentration
– Fatigue
– Acceptability

Some Applications:

• Case 1 (Mouse-Driven Text Editor)
– During the development of the Xerox Star KLMs served as expert proxies.
• Case 2 (Directory Assistance Workstation)
– The KLM clarified the tradeoffs between the number of keystrokes entered in the query and the number of returned fields.

For our Project:

When the app is opened it consists of 2 buttons (1) for emergency and (2) for non-emergency.

Case 1: For emergency
The steps are:

Operators	Action	Time Taken
K	Clicking on the app	0.20
M	The main menu of the app pops up after so mental processing	1.35
K	Clicking on the "Emergency" tab	0.20
R	The GPS of the mobile is being send to nearby ambulances.	2.95
TOTAL		**4.70**

Case 2: For Non-emergency

This one highly depends on what the user wants to have like:

The Common work:
[A]Login into the account.
[B]Sign Up an account.

These are considered once the patient/doctor has logged into the account:

The Patient point of view:
[A] Just to check out the nearby hospitals and doctors.
[B] To specify a particular disease and check the nearby available doctors to aid the disease.
[C] To put the prescription into the user's account for the doctor to see the past records.
[D] To send message to particular doctor regarding a particular disease that the patient may/may not be having.

The Doctor point of view:
[A] Reply back a message send by the patient.
[B] Ask the patient for prescription in order to view the past record.

The Common Work to be done by both(Patient and Doctor):

[A]Login into the account.
The steps are:

Operators	Action	Time Taken
K	Clicking on the app	0.20
M	The main menu of the app pops up after so mental processing	1.35
K	Clicking on the “Non-emergency” tab	0.20
P	Point to the “Login”	1.10
K	Clicking on the login	0.20
M	The “username” and “password” is shown after some mental processing	1.35
H	Type the “Prescription”	0.40
K	Clicking on the “Submit” button	0.20
M	The patient will the prescription submitted on the app after so mental processing	1.35
TOTAL		**6.35**

[B]Sign Up an account.
The steps are:

Operators	Action	Time Taken
K	Clicking on the app	0.20
M	The main menu of the app pops up after so mental processing	1.35
K	Clicking on the “Non-emergency” tab	0.20
P	Point to the “Signup”	1.10
K	Clicking on the Signup	0.20
M	The “username”, “password” and “confirmed password” is shown after some mental processing	1.35
H	Type the “username”, ”password” and “confirmed password”	0.40

K	Clicking on the “Submit” button	0.20
M	The user account of the app pops up after so mental processing	1.35
TOTAL		**6.35**

Now we go for the **Patient point of view**:
Therefore the things that a patient can do are:

[A] Just to check out the nearby hospitals and doctors.
The steps are:

Operators	Action	Time Taken
K	Clicking on the “Doctors” tab.	0.20
M	The “Doctor” menu of the app pops up after so mental processing	1.35
K	Clicking on the “Types of Doctors” tab	0.20
M	The List of different doctors comes out on the app after so mental processing	1.35
P	Point to the particular doctor type	1.10
K	Clicking on the doctor type. Say, Cardiologist	0.20
M	The name of the doctors and hospitals they work in are shown is shown after some mental processing	1.35
TOTAL		**5.75**

[B] To specify a particular disease and check the nearby available doctors to aid the disease.
The Steps are:

Operators	Action	Time Taken
K	Clicking on the “Patients” tab.	0.20
M	The “Patient” menu of the app pops up after so mental processing	1.35

K	Clicking on the “Diseases” tab	0.20
H	Type the “disease occurred to the patient”	0.40
M	The app checks for the doctor in the database and displays the result after so mental processing (If no doctor is present then it will show “No Doctor Available”).	1.35
TOTAL		**3.50**

[C] To put the prescription into the user’s account for the doctor to see the past records.
The Steps are:

Operators	Action	Time Taken
K	Clicking on the “Patients” tab.	0.20
M	The “Patient” menu of the app pops up after so mental processing	1.35
K	Clicking on the “Prescription” tab	0.20
H	Type the “disease occurred to the patient”	0.40
M	The app checks for the doctor in the database and displays the result after so mental processing (If no doctor is present then it will show “No Doctor Available”).	1.35
TOTAL		**3.50**

[D] To send message to particular doctor regarding a particular disease that the patient may/may not be having.
The Steps are:

Operators	Action	Time Taken
K	Clicking on the “Patients” tab.	0.20
M	The “Patient” menu of the app pops up after so mental processing	1.35

K	Clicking on the “Diseases” tab	0.20
H	Type the “disease occurred to the patient”	0.40
M	The app checks for the doctor in the database and displays the result after so mental processing (If no doctor is present then it will show “No Doctor Available”).	1.35
K	Clicking on the “conversion” tab.	0.20
M	The message window comes to send the message on the app pops up after so mental processing	1.35
H	The Message is typed by the patient	0.40
K	Clicking on the “Send” button.	0.20
R	The message reaches the particular doctor.	0.60(approx)
TOTAL		**6.50**

Now we go for the **Doctor point of view**:
Therefore the things that doctors can do are:

[A] Reply back a message send by the patient.
The Steps are:

Operators	Action	Time Taken
K	Clicking on the “Messages” tab.	0.20
M	The “Messages” menu of the app pops up after so mental processing	1.35
K	Clicking on the patient’s message tab(if any)	0.20
H	Type the “Reply to the message”(after reading)	0.40
K	Clicking on the “Send” button.	0.20
R	The message reaches the particular patient.	0.60(approx)

TOTAL	2.95

[B] Ask the patient for prescription in order to view the past record.
The Steps are:

Operators	Action	Time Taken
K	Clicking on the "Seeing Prescription" tab.	0.20
M	The "Seeing Prescription" menu of the app pops up after so mental processing. (See the prescription send by the patient and if not send then go for the messaging to ask the patient for the prescription)	1.35
K	Clicking on the "Patients" tab.	0.20
M	The "Patient" menu of the app pops up after so mental processing	1.35
K	Clicking on the patient's message tab	0.20
H	Type the "Ask to send the prescription"	0.40
K	Clicking on the "Send" button.	0.20
R	The message reaches the particular patient.	0.60(approx)
TOTAL		**4.50**

If the patient has already send a prescription:

Operators	Action	Time Taken
K	Clicking on the "Seeing Prescription" tab.	0.20
M	The "Seeing Prescription" menu of the app pops up after so mental processing. (See the prescription send by the patient and if not send then go for the messaging to ask the patient for the prescription)	1.35

K	Click on a particular patient's id to check the information	0.20
TOTAL		**1.75**

Thus these are the various KLM model for our project and our goal is not accomplish as much as possible.

THANK YOU