**"E-Assistant"** School of Information Technology, National University of Mongolia

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***1. Introduction.*** Nowadays personal computer is one of creative tools for human. Everyday developers build new software to make a life easier; simultaneously it brings us many new information and even problems.

Our system "E-Assistant" intended to be everyday assistant, an advisor and a friend to perform computer users' tasks easier. The system has following features:
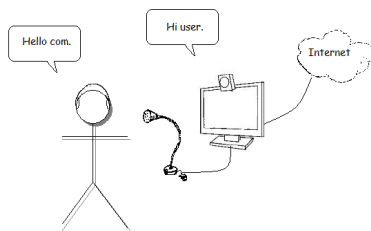


Image-1 *System's hardware connection*

## 2. System features.

1. Based on human recognition by face using web camera, save screen and energy.

Current screen and power saving approaches based on timer so it can't determine the user is
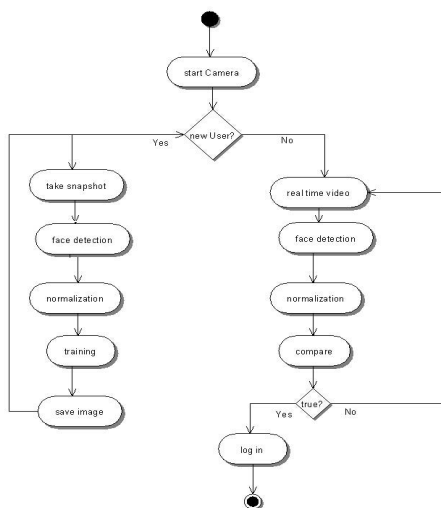


Image-2 *Activity diagram of Face recognition*

looking at screen or left the computer, thus it is inefficient, when computer's monitor consumes high energy. (Image-2)

2. Performs tasks by voice. Users can create their own "voice shortcuts" for multistep works to save time. (Image-3)
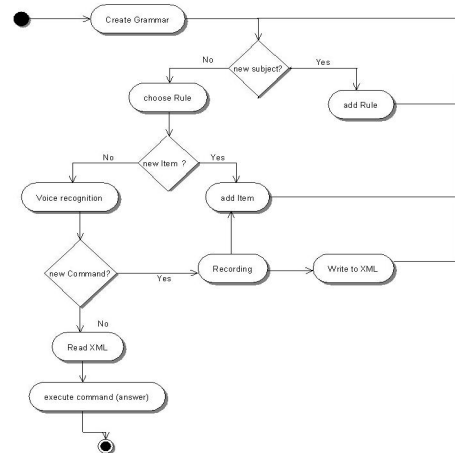


Image-3 *Activity diagram of Speech recognition*

3. Automatically checks and informs your interested news from predefined sites

4. Searches digital content by voice from the Internet.

5. Searches real world items from your voice notes. Users can create voice note and can search notes by voice. Also, users can save the location of the real world objects such as books, tools by voice then can find it by voice.

6. Automatic solution finder for computer problems. "E-Assistant" system monitors events and finds a solution from the Internet and advises it to users.

***3. Technologies and tools:*** SSML, Ms Speech API, RSS, OpenCV, .NET framework 2.0/C#

***4. Conclusion.*** *This highly customizable and expandable system helps to make computer related common, repetitive tasks easier and create more leisure time, by combining modern information processing technologies and standards, such as SSML, XML, image and speech processing technologies using low cost and simple devices, e.g. web cam and microphone.*