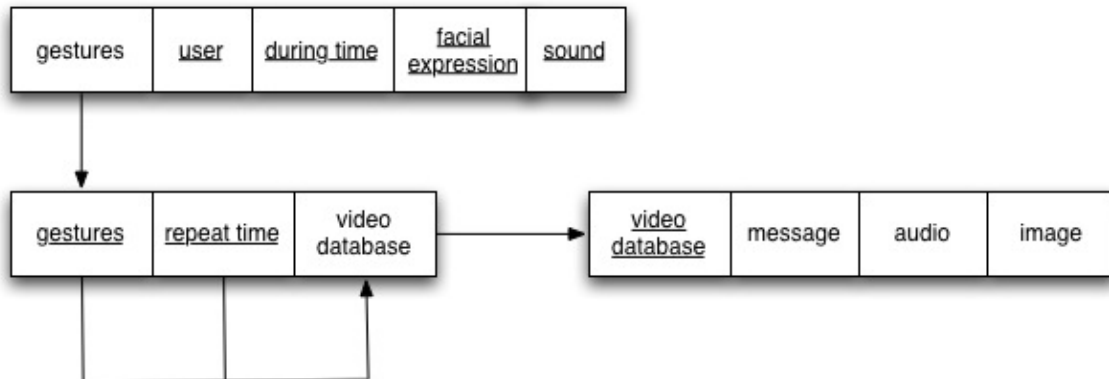


Software engineering homework 4

Mengmeng Li

1. Database design:



The first relation is between gesture and the user, during time, facial expression, sound. Gesture is the foreign key, and the combination of the user, time, during time, facial expression is the primary key, which can uniquely identify a gesture.

In the second part, it is about the relation between the combination of gesture and repeat time and the video database. In this relation, the combination of gesture and repeat time is the primary key, and the video database is a foreign key, which is decided by the primary key.

In the third part, it is about the relation between the video database and the message, audio and image. Here, the video database is the primary key, which can uniquely decide the combination of the message that should be sent to the emergency center.

2. IC-card

The gesture recognition system is in a pattern of chain, because a series of the passing of message has to be in an order. For example, the patients has to show the gestures first, before the receiving of the gesture recognition system, and the recognition system has to finish translating the gesture before send the corresponding message to the emergency center. In this way, the processes are shown below.

IC Card

IC Name: input the gestures

Description: patients input the gestures
Interaction Pattern:



By Myself with Interaction

Time Critical Condition: none
Name of Other IC: the gesture recognition system
Message to Other IC: gestures
Other IC's Task: analyze the gesture and translate
Card 1 of 1 (If necessary please use several IC cards to describe an IC)

**IC Card**

IC Name: receive the gestures

Description: receive the gestures
Interaction Pattern:



By Myself with Interaction

Time Critical Condition: once after the gestures are shown
Name of Other IC: patients
Message to Other IC: none
Other IC's Task: show gestures
Card 1 of 1 (If necessary please use several IC cards to describe an IC)

**IC Card**

IC Name: translate the gestures

Description: translate the gestures
Interaction Pattern:



By Myself no Interaction

Time Critical Condition: once receive the gestures
Name of Other IC: none
Message to Other IC: none
Other IC's Task: none
Card 1 of 1 (If necessary please use several IC cards to describe an IC)

**IC Card**

IC Name: send the translation

Description: send the translation
Interaction Pattern:



By Myself with Interaction

Time Critical Condition: once get the translation result
Name of Other IC: emergency center
Message to Other IC: translation of the gestures
Other IC's Task: receive the translation
Card 1 of 1 (If necessary please use several IC cards to describe an IC)

