

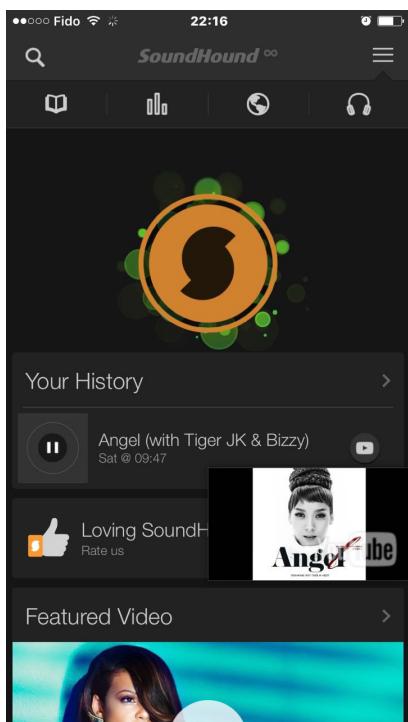
Part 1: (30%)

The conceptual model of a system is (according to your reading, see Sec 2.3 in your textbook reading) a "*high level description of how a system is organized and operates*".

1. Provide a high level description of the **conceptual model** used by the selected music streaming software service. You should provide and refer to some **screenshots** of the software you chose to critique in your description.

The model that I want to talked about is SoundHound. This app is developed in 2005, which is designed to recognize music. To be precise, when user heard a melodious music, or just a piece which they do not know the name. They can use SoundHound to look up name using network connections. According to the recognition of melody, user can get detailed information of the song, including artist, genres, compilations, even the date of the music tour of the artist and music video on Youtube. And SoundHound affords user purchase button which connect to corresponding system platform. For example, IOS version connect to apple store, and Android version connect to Google Play, etc.

For IOS platform:

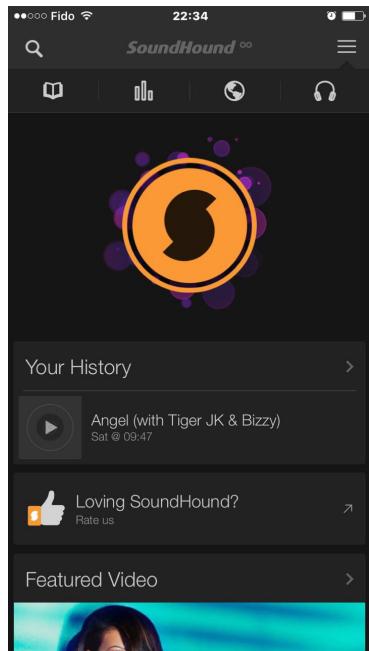


For Android platform:

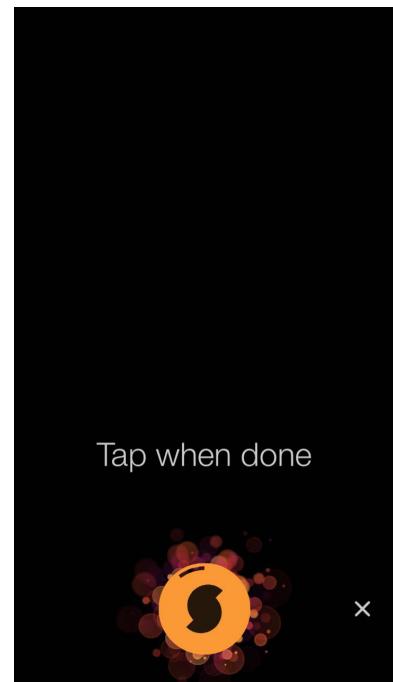
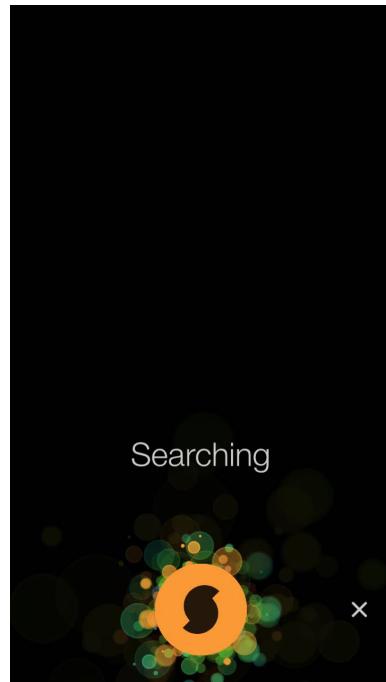
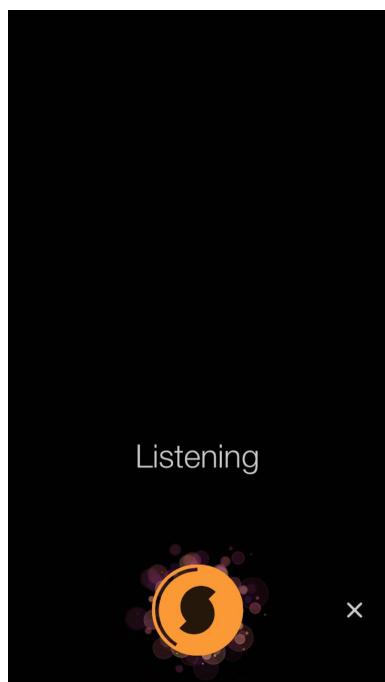


As I'm using iPhone which is IOS system platform, I will use some screenshots to explain how it works.

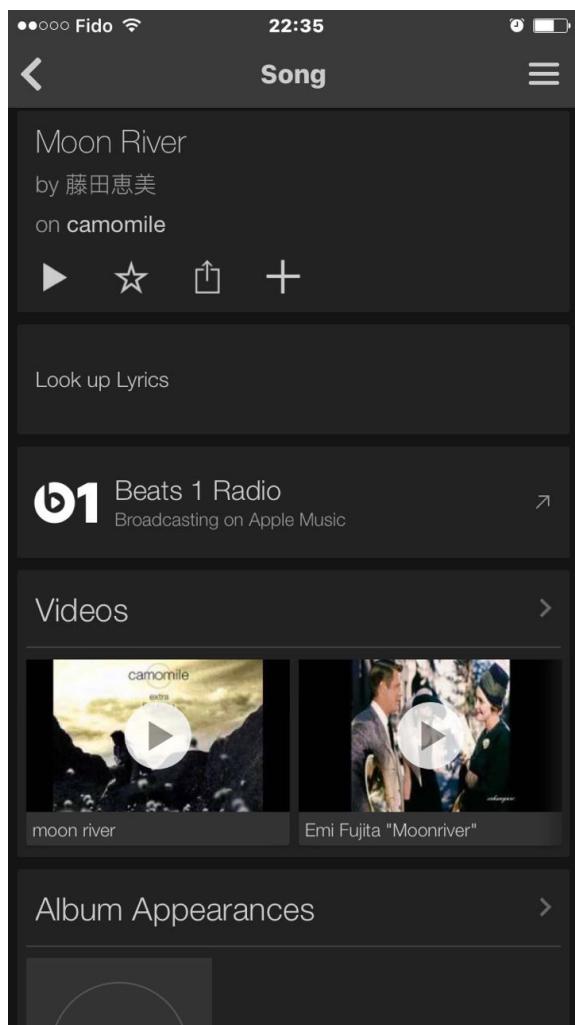
First, tap the yellow logo after you enter the app, as shown below:



Then, put your cellphone close to the sound resource, and waiting for approximate 10 seconds, follow the instructions on the screen, the process shown below:



At last, you will get the result, such as name of the song, artist, music video and album appearances:



This app is easy for using, the whole operation time is at most 15 seconds. And certainly, the whole information retrieval process based on network connections.

2. Which key **metaphors** and **analogies** are used by this software?

I think the new interface metaphors. When the app start searching process, the listening log is all around colourful bubbles with changing colour; and the size of the bubbles are changing always. Just like a human-being, trying hard to hear something.

3. What are the main **task domain objects** you can create and manipulate, and which **attributes** do these objects have? (To answer this, you need to consider which tasks does the user wish to perform)

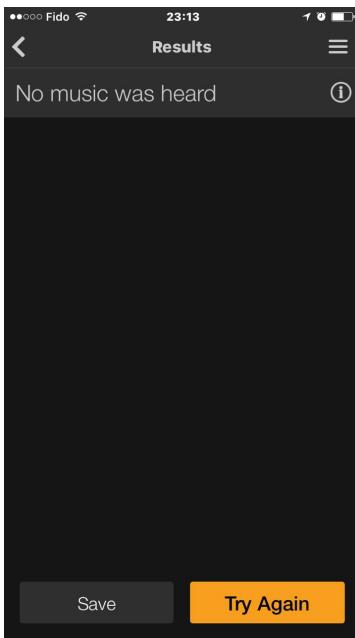
The main task of this app is recognition music. User use this app in order to find the music that they run into. Based on this appeal, this app satisfy the purpose of users. Because it is quick to open and easy to search.

4. What kinds of **relationships** exist between the conceptual model objects?

I think the entire features in this app is entwined with each other. Buttons with instructions, and operations with hints.

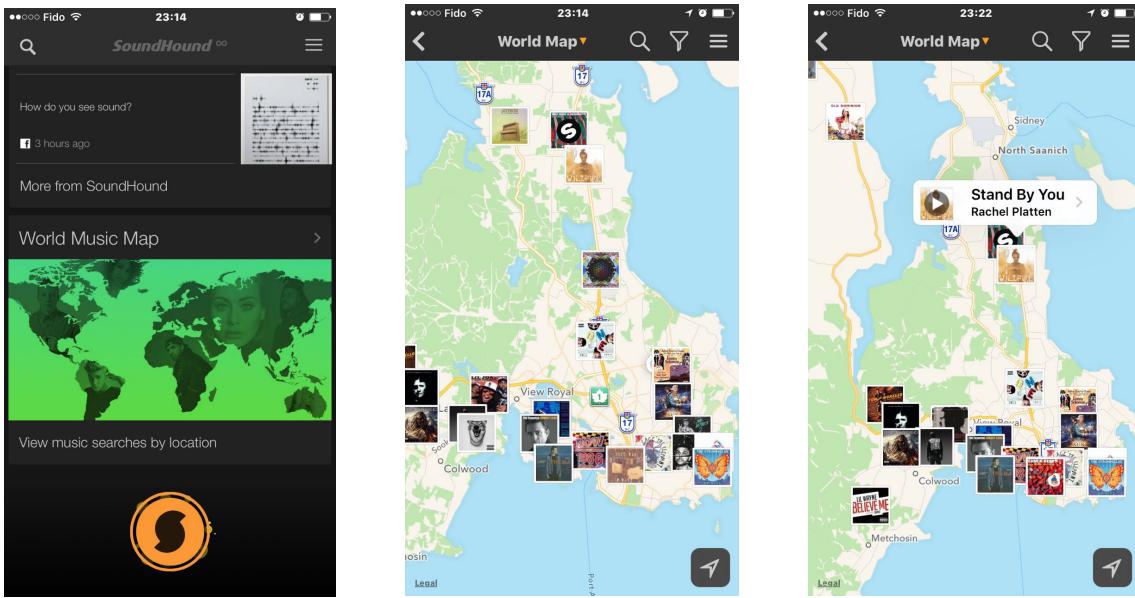
5. What kinds of **operations** are available for you to create and manipulate the domain objects, object relationships and object attributes?

When user cannot find the music that they are listening, there will be a hint ask you to save the sound clips or try again.



And if you choose save, the sound clips will be saved for the future searching; if you choose try again, the app will automatically search without any further operations.

Moreover, there is an interesting function that when you choose the World Music Map on the bottom the home page, the app will show all the music in your district which app-user around you. When you click label, there will be a tag told you the song's name. As shown below:



Part 2: (40%)

Based on Norman's "Seven Stages of Design", answer the following questions (thinking about the same music streaming music service) justifying your responses. (Hint: read Chapter 2 in Norman's book carefully before answering these questions, as some questions may seem very similar otherwise!):

1. Can you easily determine the **function of the system?**

Yes. This app's function is recognition music.

2. Can you easily tell what **actions are possible?**

Yes. At the very first beginning, if you want to look up music clips, you need to click the SoundHound loco after you enter the app.

3. Can you determine the **mapping from intention to physical movement?**

Yes. All the physical movement is natural and there is no design go against human's habits.

4. Can you easily **perform the action(s)?**

Yes. There is many instructions for every tag appear on the app.

5. Can you easily tell if the **system is in a desired state(s)**?

Yes. The system is in a desired state. As you can save your unidentifiable music clips.

6. Can you easily determine **mapping from system state to interpretation**?

Yes.

7. Can you always tell what **state the system is in**?

Yes.

8. Overall, do you think this software suffers from the Gulf of **Execution** and/or the Gulf of **Evaluation**?

Yes.

Part 3: (30%)

Referring to the conceptual model you described above and your analysis using Norman's seven stages of action, answer the following questions (you may wish to include screenshots or drawings to augment your responses):

1. Overall, do you think the software offers a good **conceptual model**? If not, how could it be improved?

I think the overall assessment is good. Just a few improvements. For example, SoundHound can only search music according to the melody instead of lyrics. Sometime, lyrics searching is fast than melody searching. And this app cannot avoid background noise when search songs, which will influence the searching accuracy.

2. Does the system offer good use of **Visibility**, in terms of its features and states the software is in? Could this be improved, and if so, how?

I think this app offer users' a good visibility, as every step there will be information guide you. Even it is the first time that you use this app, you can still get the result what you want as you follow the instructions step by step.

3. How does the system make use of **Mappings**? Does it make use of appropriate mappings? If not, how could they be improved?

This app does use Mapping, but I think it may can improve a little bit. For example, there is no hint of searching button instead of a SoundHound logo on the very first beginning. I think they can put searching in the middle of the logo for user click.

4. Does the system give appropriate **feedback** to the user about the actions the users can make? If not, how could it be improved?

SoundHound give really appropriate feedback to the user. For example, if user cannot find the music when they using it, then SoundHound will ask you whether you want to save the music clips or try again. I think it is much better than only tells you that there is no result.

5. Does the system leverage virtual **affordances** in its design?

Yes! This app put all functions on the first page and with short name which afford users direct information.