Project dependencies

How to make needed dependencies for final project

1. Soundio library
2. Beep library

DETAILS

Objective

You need to build object files and use them later for compiling your final project.

Source code of the Soundio should be downloaded from GitHub. (details can be found in README)

Build dependencies:

Soundio:

1. Create a directory for storing your libraries. (mkdir libs)
    (*it is recommended to create this folder in your Documents!*)
2. Change your directory to the directory you just made. (cd libs)
3. Type the following command in your terminal and hit enter:

    ```
    git clone https://github.com/andrewrk/libsoundio.git
    ```
4. Change your directory to libsoundio folder. (cd libsoundio-master)
5. Create a folder for building the source code. (mkdir build)
6. Change your directory to the directory you just made. (cd build)
7. Make your *make* file (cmake)
8. Make created files (make)
9. And finally

    ```
    sudo make install
    ```

A few more things:

You may need to install make or cmake command, you can install them using following commands:

Debian:
```
sudo apt update
sudo apt install make
sudo apt install cmake
```

Arch:
```
sudo pacman -Suy make
sudo pacman -Suy cmake
```

Some of the object files may fail to be copied to /lib or /usr/lib during the install process so you will need to copy them using terminal, you can use following commands: (run them in build dir)
```
sudo cp ./libsoundio.so.2   /usr/lib/
sudo cp ./libsoundio.so.2   /lib/
```

If you find it hard to do mentioned things you can run the attached bash script in libs dir. :))

Beep:

You will need to generate certain frequencies to play notes, to satisfy that need, we built a library for you named *beep*, you can find its object file in attachments of this tutorial.

```
int beep(float freq , int len);
```

This command will generate a certain frequency for <len> milliseconds.

How to build your project

1. Include "beep.h" in your source code. (You should copy "beep.h" in your project directory.)

2. Copy libsoundio.so.2 in your project directory

```
cp libsoundio.so.2   where_ever_your_project_main.c_located
```

3. Copy "beep.o" in your project directory .

4. Use the following command to compile and run your project:

```
gcc    name_of_your_file.c   beep.o   libsoundio.so.2 -lm
```