Sound

The Sound component represents all the music and sound effect playback functionality in SimsU. For its underlying architecture, Sound uses SDL (http://www.libsdl.org), a sound library that allows both midi and wav files to be played simultaneously. Essentially, Sound is serving as a "wrapper" component for SDL, so that the other components (Logic and GUI) can call Sound's functions without having to worry about all the technicalities of SDL.

Sound consists of a single class: Sound.C. There are 2 major functions in Sound.C that the Logic and GUI components call: playMusic and playSound, with the former corresponding to continuous background music (midi) and the latter corresponding to brief sound effects (wav).

- When playMusic is called, only one MusicType may be playing at a given time; if playMusic is called again while another MusicType is still playing, the old MusicType stops and the new MusicType starts playing.

- When playSound is called, multiple SoundTypes may be playing at a given time. playSound can also play while playMusic is being called; thus, background music and sound effects can be played simultaneously.

MusicType and SoundType are enums that store various music & sound types as ints, but represent them as normal English words. This makes it easier to debug and code, since we will only have to know those MusicTypes and SoundTypes that are listed. For example, if Logic wants to play music that reflects a successful university, the function call will be: sound->playMusic(GOOD_STATUS).

playMusic

`void playMusic(MusicType mt)`

This method plays MusicTypes, which are continuous, background music midi files.

playSound

`void playSound(SoundType st)`

This method plays SoundTypes, which are brief, sound effect wav files.

stopMusic

`void stopMusic()`

This method stops the current MusicType (if there is music currently playing).

openAudioDevice

```
bool openAudioDevice()
```

This method opens the audio device that exists on the computer; if successful, returns true, otherwise false

closeAudioDevice

```
bool closeAudioDevice()
```

This method closes the audio device if successful, returns true, otherwise false.

pause

```
void pause()
```

This method pauses the current MusicType temporarily until resume() is called. NOTE: this is different from stopMusic(…), which completely stops the music and resets the current MusicType.

resume

```
void resume()
```

This method resumes the current MusicType (if it is in the paused state).

mute

```
void mute()
```

This method mutes all audio output (i.e. both music and sound effects).

replay

```
void replay()
```

This method replays (“un-mutes”) all audio output.

setVolume

```
void setVolume(int level)
```

This method allows the user to set the volume level.

getVolume

```
int getVolume()
```

This method returns the current volume level.