Smile Budding: a Modern, Interesting, Smile-Oriented Virtual Companion Software

Team ID
Too_Young_Too_Simple

Team Member
Tianyang Yang (ty2388)
Xi Lin (xl2793)
Ruolin Jia (rj2537)
Lixing Zhang (lz2636)
Benhao Chen(bc2801)

Github Repo
https://github.com/hreatx/TYTS

Dependency
python3.6 or above, PyQt5, openCV, requests, pyinstaller, setuptools, pylint, coverage

Dependency Installation Commands
pip3 install pyqt5
pip3 install opencv-python
pip3 install requests
pip3 install pyinstaller
pip3 install --upgrade setuptools
pip3 install pylint
pip3 install coverage

Starting the Game
git clone https://github.com/hreatx/TYTS.git
cd TYTS
./beginGame.sh

Alternative Way to Build the Software
We use pyinstaller (https://www.pyinstaller.org/) to build the software.
The build is automatically done by Travis CI.
See following file about the build setting
- TYTS/.pre-commit-config.yaml

Testing the Software

The tests are all automated by applying CI principles.
We covered both static analysis and unit testing.
Static analysis is done in the pre-commit.
See our setting in:

- TYTS/.pre-commit-config.yaml

Unit tests are run in post-commit with Travis CI
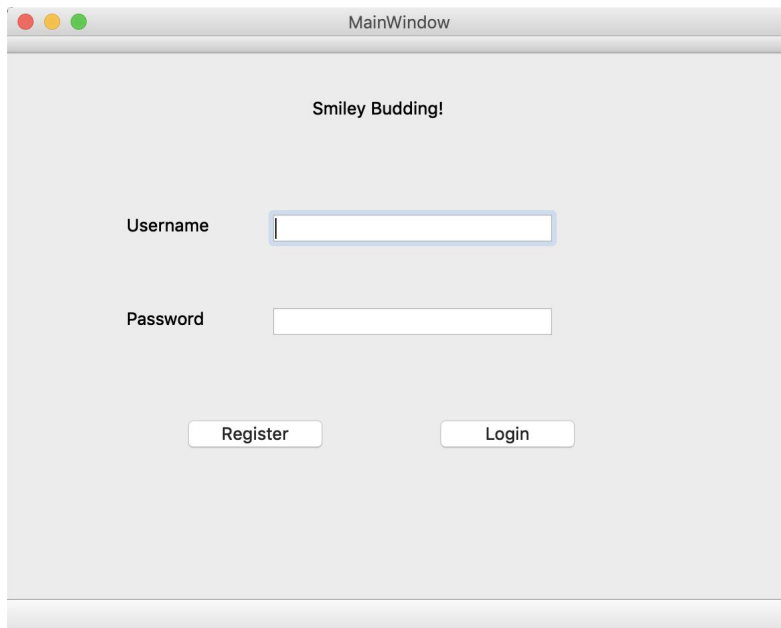See our setting in:

- TYTS/.travis.yml

Our unit tests are implemented in:

- testBuddingStore.py
- testBuddingWidget.py
- testEventController.py

Full Operating Guide

1. Registration

After running ./beginGame.sh, you should be able to see a new window show up:

For the first time user, you should input a valid username and password to register a new account. Both username and password should be not null. If one of them is null, a warning window will show up to prompt the user to re-enter the valid input as follows:
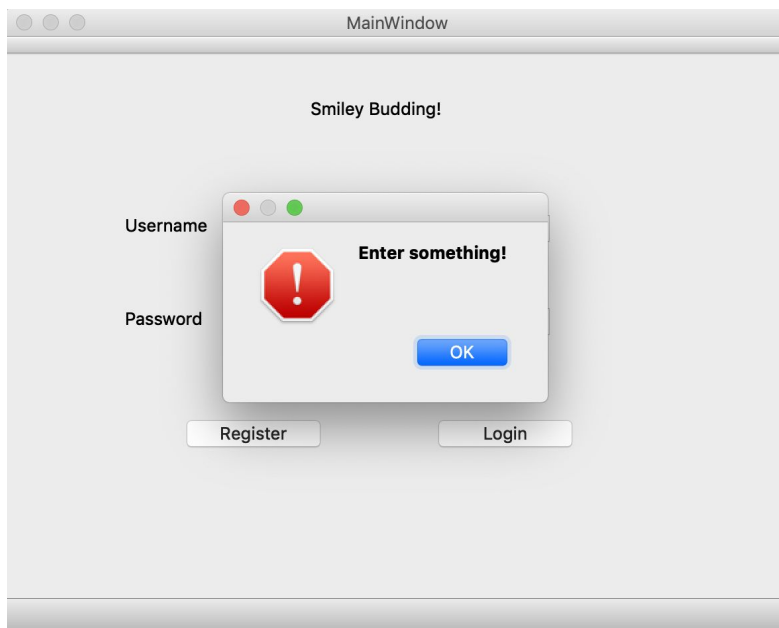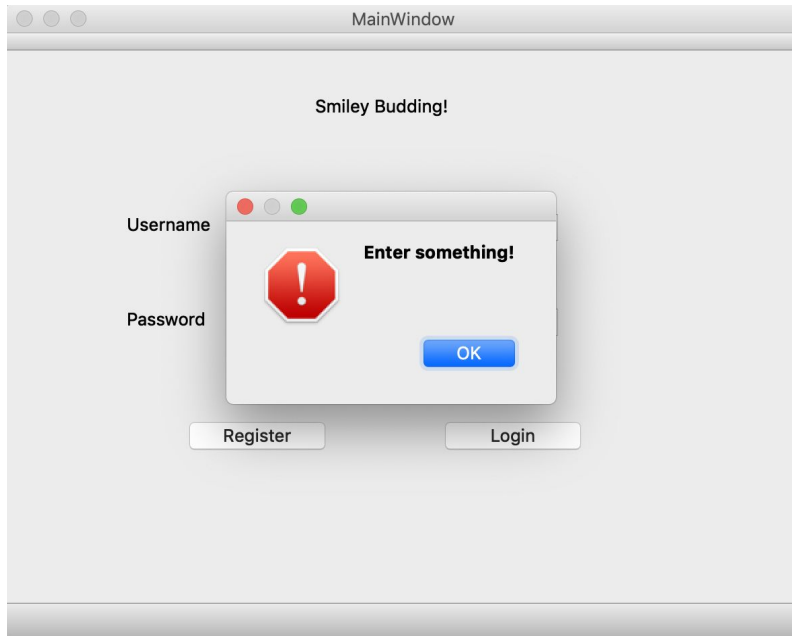
When the user finally inputs a valid combination of username and password, a message box will show up to confirm the successful registration:
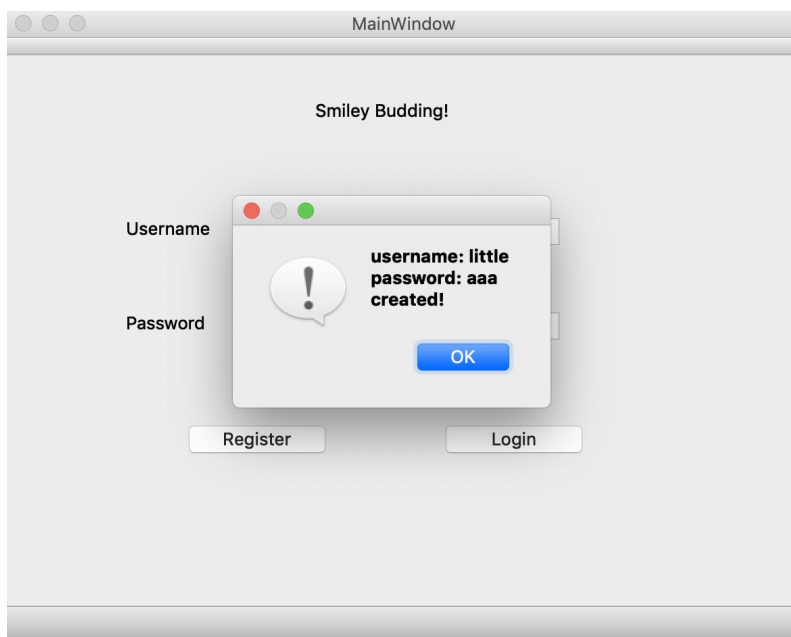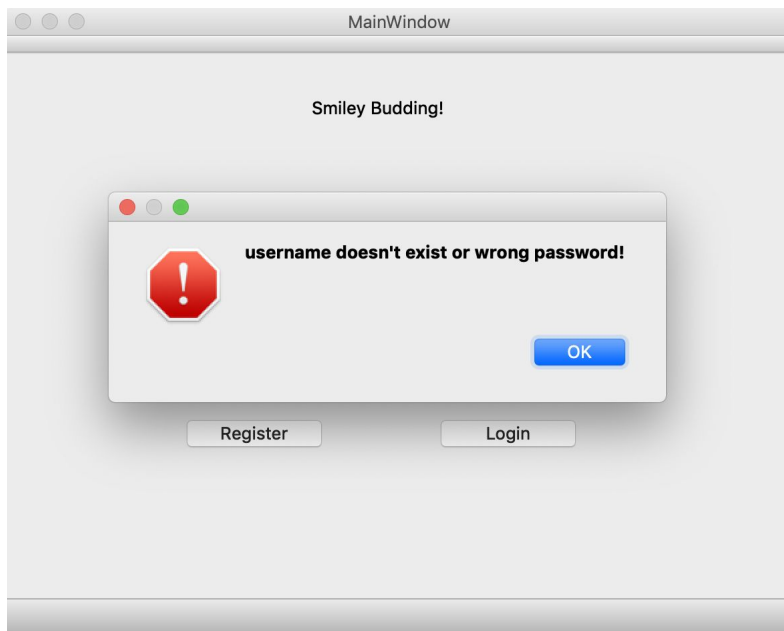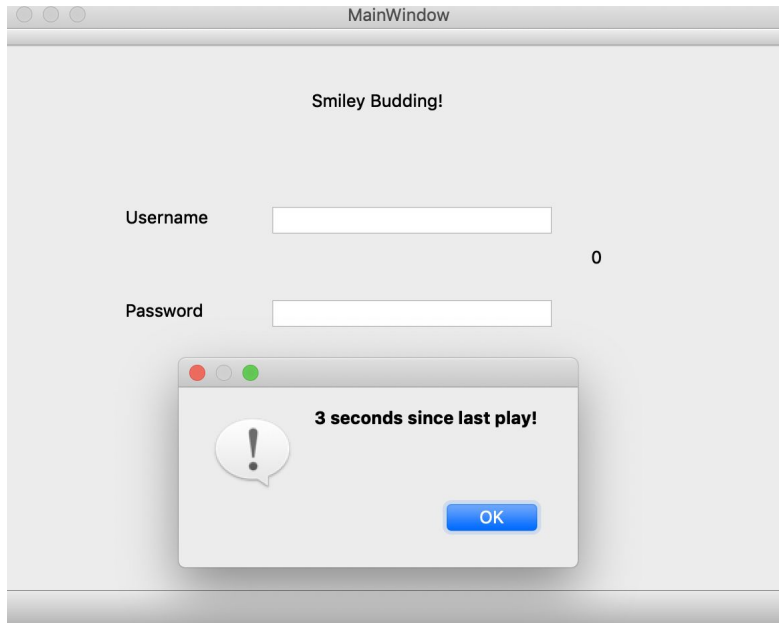

2. Log in
The user should enter username and password to log in. If one of them is null, a window will show up to prompt the user to re-enter:
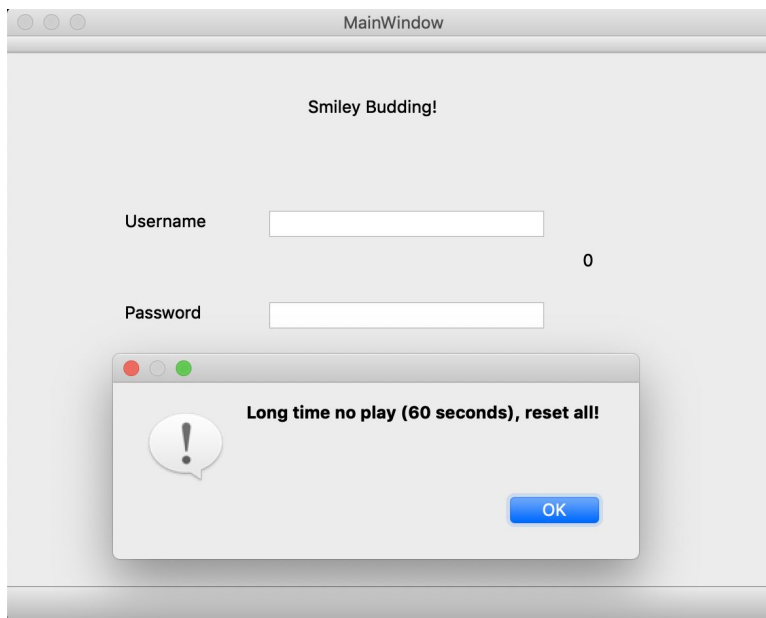
If the username doesn't exist or password doesn't match the username, a window will show up to prompt the user to re-enter:


When the user finally enters a valid username and password, a window will show up to show the last log out time of the user:

If the difference between the last log out time and this log in time is too big, the data of the user will be reset:


On either situation, after successfully logging in, the main window of our software will show up. The meaning of each label and button should be self-explain. Budding will have three different levels, "Sad", "Neutral" and "Happy", shown in the upper right corner of the main window. The virtual money of the user is shown in the upper left corner of the main window.
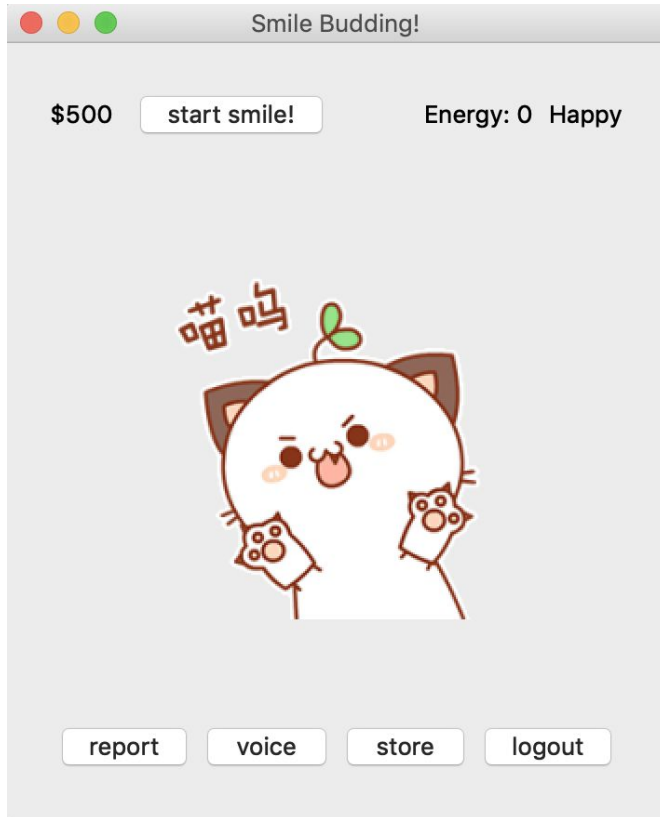
**3. Smile Detection and Earning Virtual Money**
Click "start smile" button
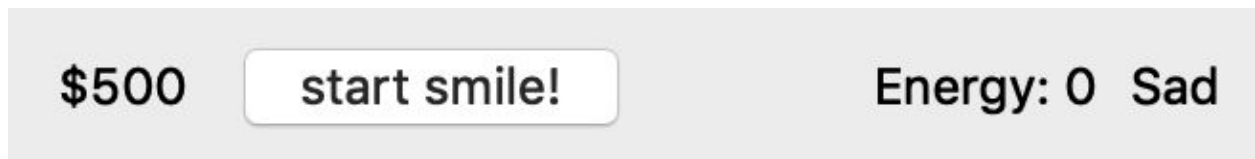
Then you smile to the camera. If your smile is successful, you will get money. Otherwise, you will lose money. The new amount of virtual money that the user has will be updated and shown in the upper left corner of the main window.

4. Patting the Budding
When you click the image of the Budding. The Budding should change its appearance. The appearance's type is based on Budding's level.
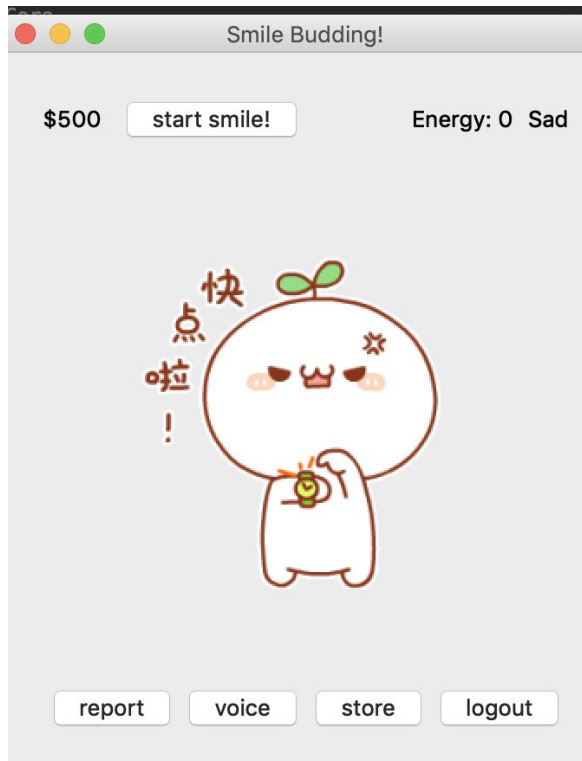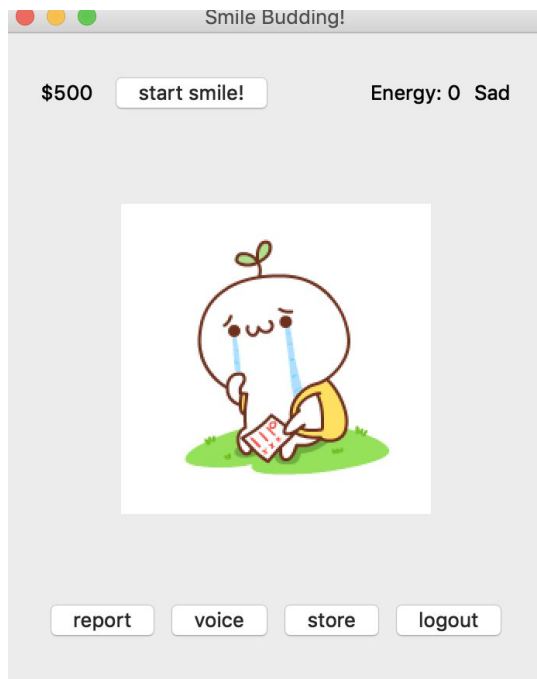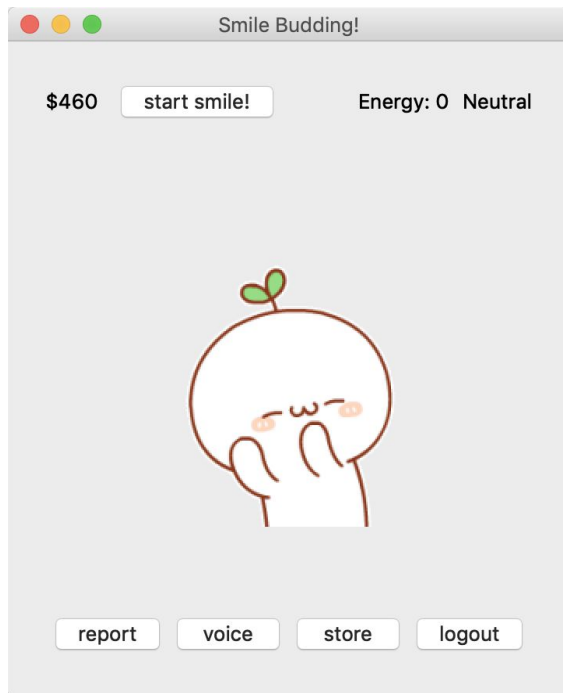
(Click the Budding)
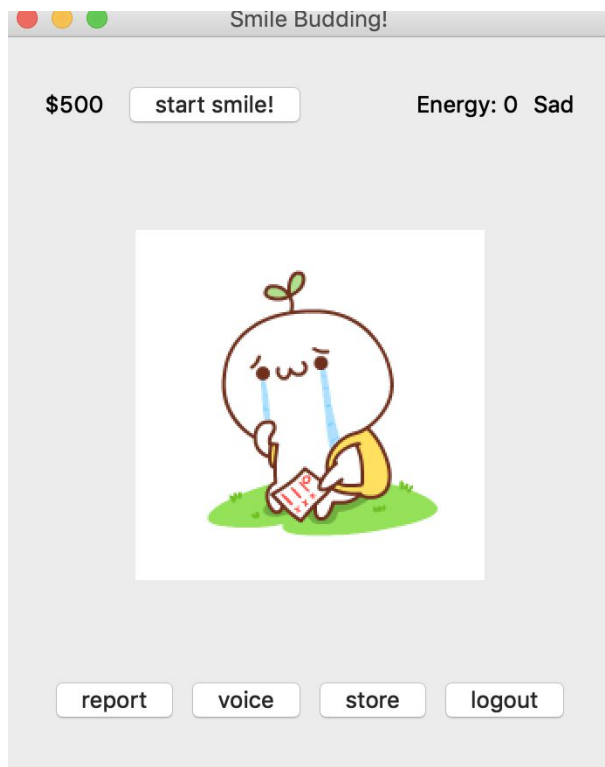
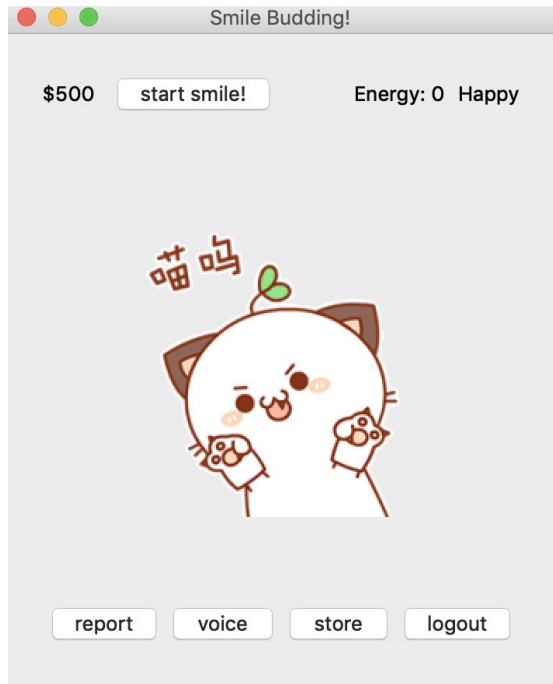And below is the sample appearance of Budding at each level:
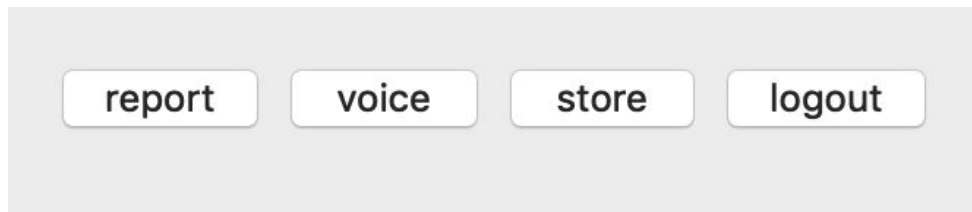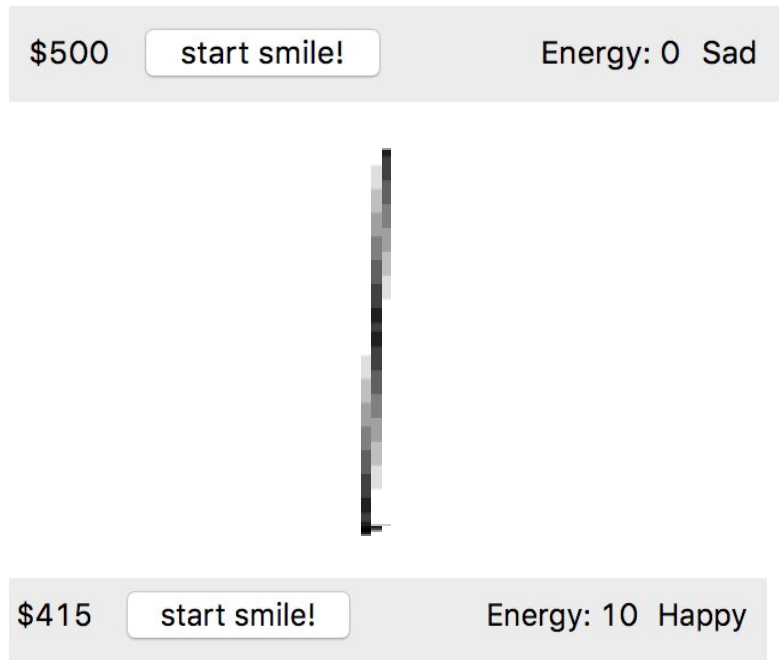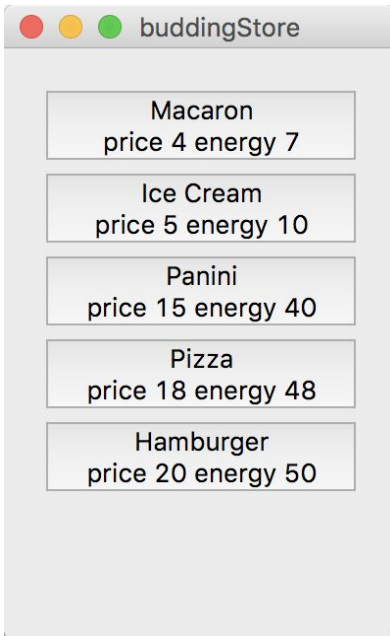
Sad:

Neutral:

Happy:

5. Background Music

By default, after the successfully logging in, the background music will be automatically on based on the current level of the user's Budding. If the user wants to toggle the music on/off, the user should click on the "voice" button, and the music on/off will toggle. The music will change upon level-up.

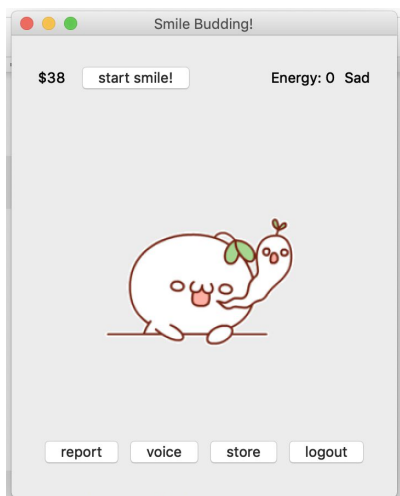### 6. Shopping in the Store

The user can purchase items in store window by clicking on "store" button. A window will show and list all items in the store, with their price and energy they can provide. By clicking the item button, the user will spend the corresponding amount of money and gain energy instantly. If the energy exceed the maximum value, Budding will level up and the energy will be reset.

buddingStore		
Macaron price 4 energy 7		
Ice Cream price 5 energy 10		
Panini price 15 energy 40		
Pizza price 18 energy 48		
Hamburger price 20 energy 50		

$500   start smile!   Energy: 0 Sad

$415   start smile!   Energy: 10 Happy

7. Report Generation

The user can generate a summary report about his or her play history

Smile Budding!

$38   start smile!   Energy: 0 Sad

report   voice   store   logout

(Click the report button)

Report for username 1

CurrentMoney 38

Energy 0 ,Level 1

Current play time (seconds) 2

Play time in total (seconds) 77
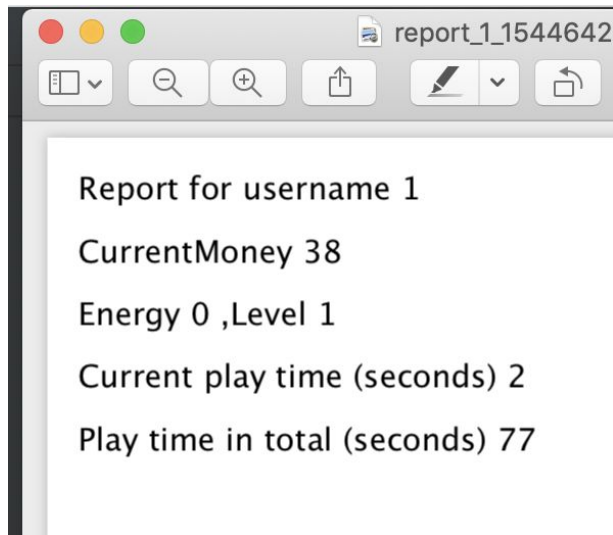
(Example report)

8. Logout

When the user no longer wants to play the game, the user can either press the close button of the window, or press the "logout" button in the bottom right of the main window. If the user presses the close button of the main window, the software will exit. If the user presses the logout button, the main window will close and the login window will show up to allow other users to log in.

Before clicking logout:
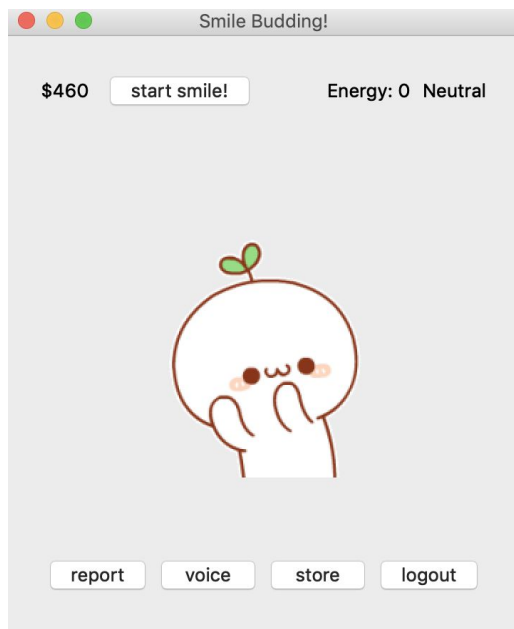
After clicking logout:

MainWindow

Smiley Budding!

Username   [   ]

Password   [   ]

[Register]   [Login]