

Computer Science 112

Computer Science with Java II

Spring, 2016



Lab Report – Week [3] - [API Programming Assignment]

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Assignment Analysis and Design

For this project, I chose to experiment with the FreeTTS API. I programmed the logic for a game outlined in chapter 17. The program chooses a random number, and asks the user to guess it, telling if the guess is correct, too high, or too low. First I designed the game logic itself, with a pair of while loops. I used prompt and captures in the inner loop until the player guesses the right number, after which he is prompted to play again. If the user chooses to quit, the outer loop terminates via the boolean userQuit. Then I added the actual FreeTTS API voice into the program. I defined a String named message to hold whatever would be output to the user. Then I used message in both the calls to System.out.println() and to speak().

Assignment Code

Source code included in attached file.

Assignment Testing

To test this program I mostly just played it a lot. I came across an intermittent error regarding the Scanner class's nextLine() method. When the user is asked to play again, the original code would continue executing without waiting for the user to input anything. I could not (and still can't!) figure out why, however when I changed used the next() method instead, it solved the problem. Other than that everything functioned smoothly.

Assignment Evaluation

Adding the library was pretty simple, however I'm a little confused. If the API knows to look in a certain place for the library, and the project is moved, I think the library location would change. When the jar file is built, I see that the lib files are added to the dist folder, but the project itself doesn't look there. When the project is opened from another computer, I speculate that the user(me, and now you I suppose) would have to manually re add the library for the project to run. In either case, the API was very easy to use. I'm curious as to why the voiceManager class is used as the constructor call in voice, similar to how layoutManager is used in SWING, but I suppose that sort of thing will get explained eventually. Design patterns maybe?