

SIT102 Introduction to Programming



Credit Task 1.3: Make a Scene!

Overview

Now that you have grasped some of the key programming ideas related to procedure declarations, procedure calls, and sequence, you can start to use these to build more interesting programs. In this task you will create a simple animation by creating a script that opens a window, and loads and draws bitmaps, and plays sound effects.

Note:

Remember that this is a Credit Tasks. Please make sure that you are up to date with the Pass Tasks before attempting this task.

Submission Details

For this task you need to create a small animation program: something like showing a basic comic with the comic's cells and some associated sound effects.

Submit the following files to OnTrack.

- Your program code
- A screen shot of your program running

The focus of this task is to give you a chance to be creative, while also practicing your programming skills.

Your Task

You should be able to create a simple animation by using SplashKit procedures to open a window, load and draw bitmaps, and load and play sound effects. You can make a simple animation by crafting the sequence of actions the program performs. For example:

1. Open a window
2. Load the bitmap and sound effects you need
3. Clear the screen
4. Draw a bitmap
5. Refresh the screen
6. Play a sound effect
7. Delay for a period of time
8. Clear and draw a different bitmap
9. Refresh the screen
10. Delay again

Feel free to download and use images and sound effects you can get from the Internet. It is probably best to work with **png** files for images, and **ogg** or **wav** files for sound effects. You could find an interesting [xkcd](#) and break it up into its cells, draw them one at a time with some associated sound effects.

What you show is up to you, but please avoid anything that may be offensive to others in any way.

Note:

Remember to create this as a new program. Once you have it setup in the terminal you can use `skm resources` to create the resource folders where you need to add the images and sound effects you want to use.

SplashKit has the following procedures you could use to work with images, sound effects, and fonts:

Procedure	Example
<code>load_bitmap(name, filename)</code>	<code>load_bitmap("player", "ship.png");</code>
<code>draw_bitmap(name, x, y)</code>	<code>draw_bitmap("player", 10, 75);</code>
<code>load_sound_effect(name, filename)</code>	<code>load_sound_effect("player-hit", "boom.wav");</code>
<code>play_sound_effect(name)</code>	<code>play_sound_effect("player-hit");</code>
<code>load_font(name, filename)</code>	<code>load_font("game-font", "arial.ttf");</code>
<code>draw_text(text, color, font_name, font_size, x, y)</code>	<code>draw_text("Welcome!", COLOR_BLACK, "game-font", 14, 100, 150);</code>

SplashKit will search for these resource files in a **Resources** folder associated with your program (see image). Images like *ship.png* would need to be put in the *images* folder, sound effects like *boom.wav* go in the *sounds* folder, and fonts like *arial.ttf* go in the *fonts* folder.

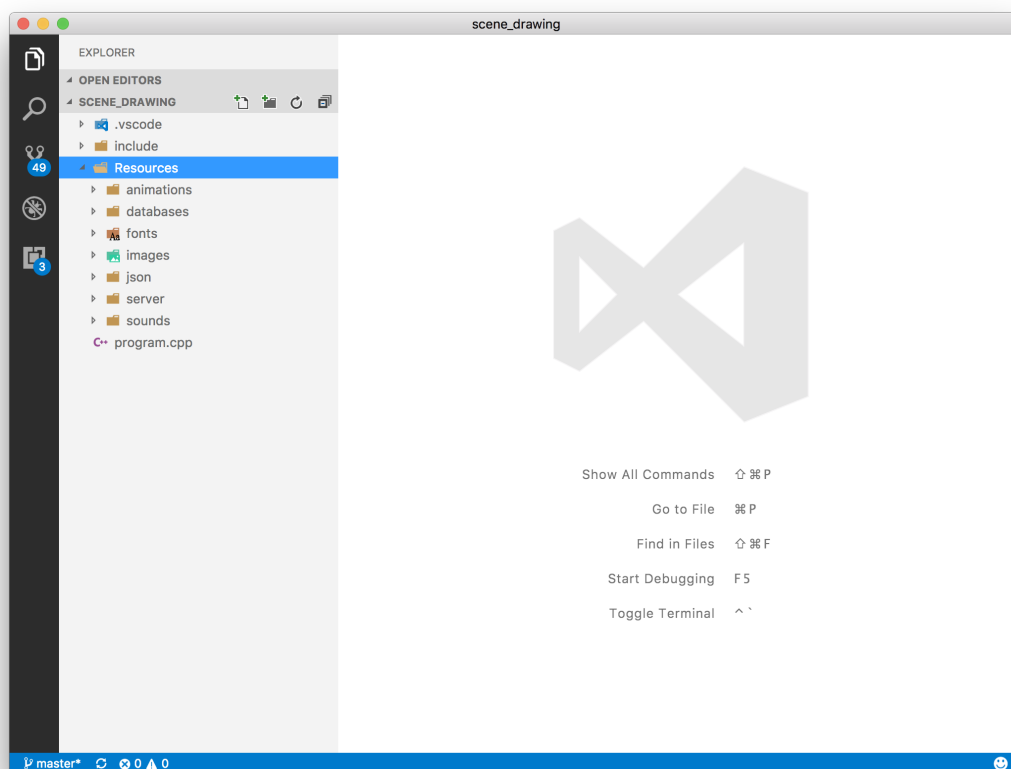


Figure: Resources folders for SplashKit

Have a look at the documentation on splashkit.io for other procedures you could play with. Maybe start with the [double buffering](#) and the article on [Getting Started with SplashKit Audio](#).

It would be great if you could share what you come up with to the discussion board. If you are game, capture a screencast of your program running and post it up to [YouTube](#) or some other video sharing service. Include a comment in your code with the link so that we can check it out as well.

- Linux: There are a number of options for [screencasts](#) in Ubuntu and other distros.
- macOS: Use **QuickTime Player** to record screencasts. From the File menu choose *New Screen Recording*.
- Windows: Try the Game Bar to record video (activate with *Win + G*)

We look forward to seeing what you can create!

Task Discussion

For this task you need to discuss at least the following with your tutor:

- Describe how this program demonstrates what you have learnt about defining and calling procedures.
- Showcase what you have created
- Discuss any issues or questions you have about working with software libraries (such as SplashKit)