CS50's Introduction to Programming with Python

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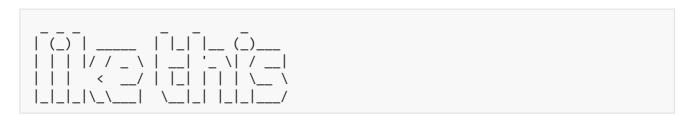
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Frank, Ian and Glen's Letters

FIGlet (https://en.wikipedia.org/wiki/FIGlet), named after Frank, Ian, and Glen's letters (http://www.figlet.org/faq.html), is a program from the early 1990s for making large letters out of ordinary text, a form of ASCII art (https://en.wikipedia.org/wiki/ASCII_art):



Among the fonts supported by FIGlet are those at <u>figlet.org/examples.html</u> (http://www.figlet.org/examples.html).

FIGlet has since been ported to Python as a module called pyfiglet/0.7/).

In a file called figlet.py, implement a program that:

- Expects zero or two command-line arguments:
 - Zero if the user would like to output text in a random font.
 - Two if the user would like to output text in a specific font, in which case the first of the two should be -f or --font, and the second of the two should be the name of the font.

- Prompts the user for a str of text.
- Outputs that text in the desired font.

If the user provides two command-line arguments and the first is not -f or --font or the second is not the name of a font, the program should exit via sys.exit with an error message.

▼ Hints

You can install pyfiglet with:

```
pip install pyfiglet
```

■ The documentation for pyfiglet isn't very clear, but you can use the module as follows:

```
from pyfiglet import Figlet
figlet = Figlet()
```

You can then get a list of available fonts with code like this:

```
figlet.getFonts()
```

You can set the font with code like this, wherein | f | is the font's name as a | str |:

```
figlet.setFont(font=f)
```

And you can output text in that font with code like this, wherein s is that text as a str:

```
print(figlet.renderText(s))
```

 Note that the random module comes with quite a few functions, per docs.python.org/3/library/random.html (https://docs.python.org/3/library/random.html).

Demo

This demo's first output used a random font. Your output may vary.

Before You Begin

Log into <u>cs50.dev (https://cs50.dev/)</u>, click on your terminal window, and execute cd by itself. You should find that your terminal window's prompt resembles the below:

```
$
```

Next execute

```
mkdir figlet
```

to make a folder called figlet in your codespace.

Then execute

```
cd figlet
```

to change directories into that folder. You should now see your terminal prompt as figlet/\$. You can now execute

```
code figlet.py
```

to make a file called figlet.py where you'll write your program.

How to Test

Here's how to test your code manually:

• Run your program with python figlet.py test. Your program should exit via sys.exit and print an error message:

```
Invalid usage
```

Run your program with python figlet.py -a slant. Your program should exit via sys.exit and print an error message:

```
Invalid usage
```

Run your program with python figlet.py -f invalid_font . Your program should exit via sys.exit and print an error message:

```
Invalid usage
```

Run your program with python figlet.py -f slant . Type CS50 . Your program should print the following:

Run your program with python figlet.py -f rectangles. Type Hello, world. Your program should print the following:

Run your program with python figlet.py -f alphabet . Type Moo . Your program should print the following:

You can execute the below to check your code using check50, a program that CS50 will use to test your code when you submit. But be sure to test it yourself as well!

```
check50 cs50/problems/2022/python/figlet
```

Green smilies mean your program has passed a test! Red frownies will indicate your program output something unexpected. Visit the URL that check50 outputs to see the input check50 handed to your program, what output it expected, and what output your program actually gave.

How to Submit

In your terminal, execute the below to submit your work.

submit50 cs50/problems/2022/python/figlet