

CS50's Introduction to Programming with Python

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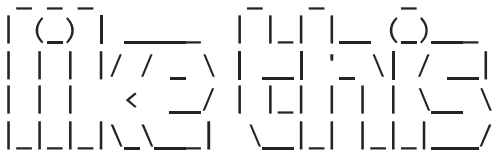
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Frank, Ian and Glen's Letters

FIGlet (<https://en.wikipedia.org/wiki/FIGlet>), named after [Frank, Ian, and Glen's letters](http://www.figlet.org/faq.html) (<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) (https://en.wikipedia.org/wiki/ASCII_art):



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

FIGlet has since been ported to Python as a module called [pyfiglet](https://pypi.org/project/pyfiglet/0.7/) (<https://pypi.org/project/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.

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:

```

M   M
MM MM
M M M ooo ooo
M   M o o o o
M   M ooo ooo

```

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
```