

# CS50's Introduction to Programming with Python

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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](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/>).

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`:

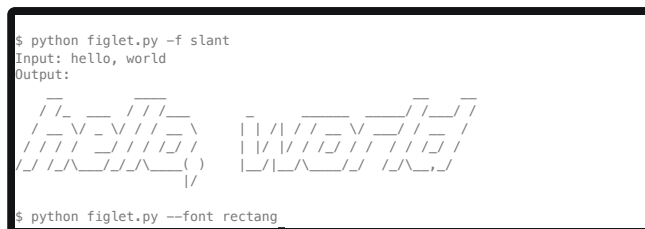
```
print(figlet.renderText(s))
```

- 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) (<https://docs.python.org/3/library/random.html>).

## Demo

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

Recorded with [asciinema](#)

## Before You Begin

Log into [cs50.dev](https://cs50.dev) (<https://cs50.dev/>), 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.

Here's how to test your code manually:

- ## Invalid usage

- ### Invalid usage

- ## Invalid usage

- 

- 

- ```

M      M
MM    MM
M M M 000 000
M      M 0 0 0 0
M      M 000 000

```

```
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

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

```
submit50 cs50/problems/2022/python/figlet
```