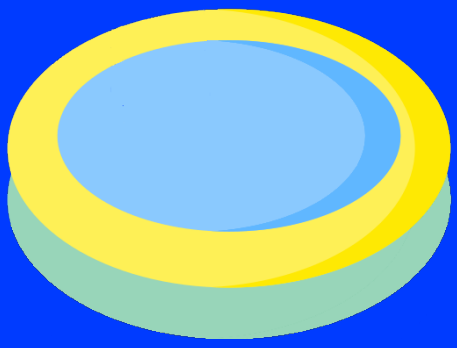
{EPITECH}

WADING POOL_

< 11 - LIBRARIES & PACKAGES />



WADING POOL

Hack The Box
In addition to the tasks below, we encourage you to discover the Hack The Box Academy. Try to go as far as possible!
Work on it as soon as you have a bit of time, or whenever you need a break in you day!

You [may] have already use `english-words-py` in a previous exercice.

Let's discover some other Python's third party **libraries** and **packages**.

”Third party” implies that those library does not already comes with your standard Python installation. You will have to install those third party libraries yourself.

Joking

Task 1.1

Find the `pyjokes` package.

Then, install it on your machine.

Check out **PIP** (Package Installer for Python).

Eventually, print a Chuck Norris fact.

Drawing

Task 2.1

Find the `turtle` package, and install it on your machine.

Then, write a program that use this package to draw a square.

Task 2.2

Can you explain precisely the following snippet of code? Which drawing will you see?

```python
import turtle
toto = turtle.Screen()
toto.bgcolor("black")
titi = turtle.Turtle()
titi.color("red")
for i in range(3):
    titi.right(90)
    titi.circle(42)
toto.exitonclick()
```

Task 2.3

Using `turtle`, write a function `draw_polygon(sides)` that takes an integer parameter `sides`.
The function draws a regular polygon with the given number of sides:

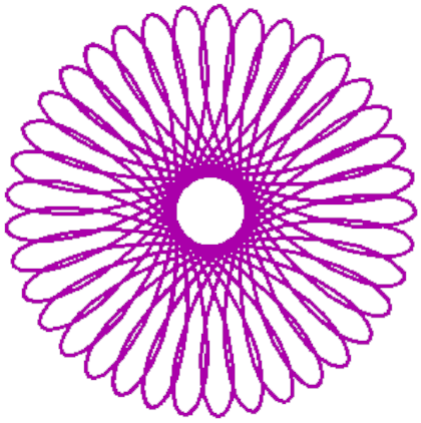
- ✓ if `sides` = 3, then it draws an equilateral triangle ;
- ✓ if `sides` = 4, then it draws a square ;
- ✓ if `sides` = 5, then it draws a pentagon ;
- ✓ if `sides` = 6, then it draws a hexagon ;
- ✓ and so on...

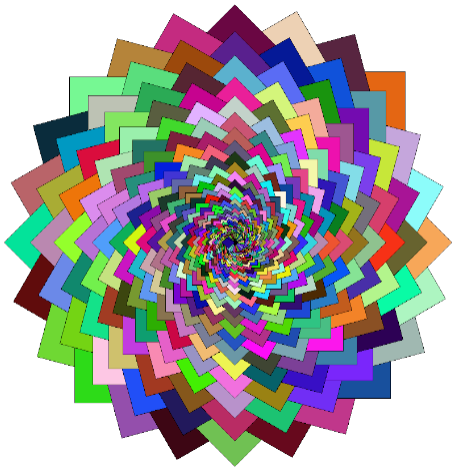
Task 2.4

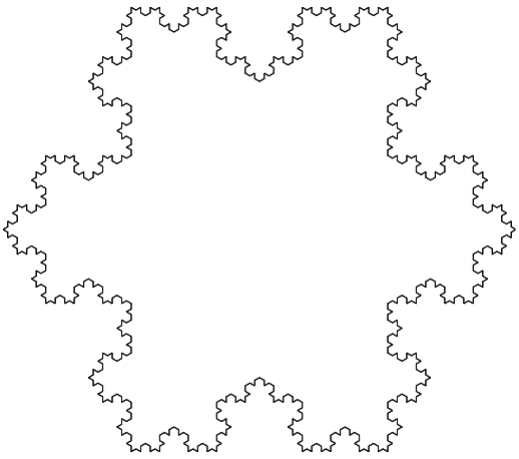
Using `turtle`, write a program to draw a spiral.

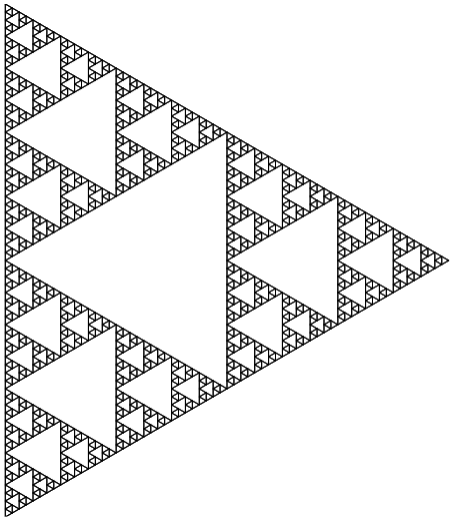
CHALLENGE

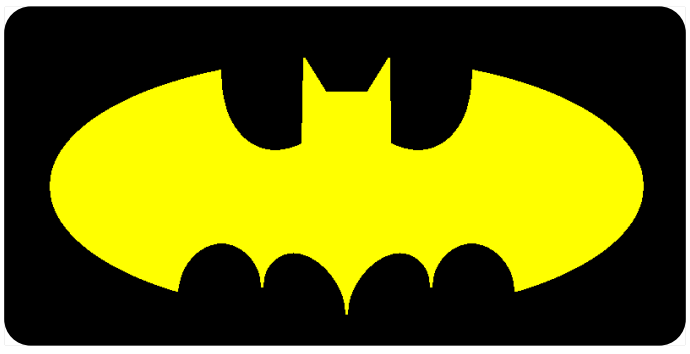
Using `turtle` and as few lines of code as possible, reproduce one (or more) of the following images.











Gaming

Task 3.1

Install the pygame package. Then, create a `hangman` folder.

Task 3.2

At the root of your `hangman` folder, create a `main.py` program to:

- ✓ import and **init**ialize the pygame package ;
- ✓ set up a pygame window having width = height = 600 px.

Run your program, a window should briefly appear then disappear.

Task 3.3

Add a loop to your `main.py` in order to:

- ✓ keep running if nothing happens ;
- ✓ look for some pygame's event ;
- ✓ close the window if the user clicks on its specific button.

Run your program, the window should stay unless you manually close it.

Task 3.4

Browse the web to find a nice background image.
Download it inside an appropriate folder.
Then, modify your `main.py` program to:

- ✓ **load** this background image inside the game ;
- ✓ **blit** the loaded image to the window ;
- ✓ **display** the window with the image.

Run your program to check if you did it right.

Task 3.5

Inside your `main.py`, create a function that draws a stickman inside the game window.

v 2.2