



## Code Breaker Game Set Up Instructions

1. If you do not have python installed on your laptop, download python from:
  - <https://www.python.org/downloads/>
2. If you do not have a code editor program installed, install an editor of your choice:
  - Notepad++ is a great option for windows devices:
    - <https://notepad-plus-plus.org/downloads/>
  - Visual Studio Code is a great option for macs or windows:
    - <https://code.visualstudio.com>
3. Create a new directory on your laptop for this activity Ex) C:\CodeBreakers
4. Download the file flower.py from google drive and copy the file into the directory you created in Step 3
  - <https://drive.google.com/drive/folders/1OigaO3nHh17a1p4KKtdxY6jq3c20aAlQ?usp=sharing>
  - If you get a message that the file cannot be scanned, chose to download anyway.
  - If you get a message that this kind of file can harm your computer, select keep.
  - These security precautions are built into most internet browsers to protect you from downloading malicious software, however, this script will not cause harm if downloaded.
5. Open the script using the editor you installed in Step 2.
6. Open command prompt (windows) or a terminal (mac)
  - For Windows Devices: open by clicking Start and then typing "cmd" into the search box
  - For Mac Devices: open your Launch Pad and then type terminal into the search box
7. In your command prompt, verify you can run the script provided
  - Change directories into the directory you created in Step 3
    - `cd /d <the directory you created in Step 3>`
    - Example: `cd /d C:\CodeBreakers`
  - Run the script using python
    - `python flower.py`
  - A secondary window should open, and a flower should be drawn
  - Click in the flower window to exit the program

# Code using Python

- Using a command prompt window run the code by typing “python flower.py”.

Observe the flower that is drawn.

- In the editor, change the value of number1 (Line 10) and number2 (Line 11). Save your change using Control + S and then run the code again. Do this more than once if you wish to help figure out the answers below.

Which numbers did you choose?

- How does number1 impact the flower?

- How does number2 impact the flower?

- Change the background color for your flower to your favorite color (Line 14) and run the code again.

What color did you choose?

- Change the pen color for your flower to your second favorite color (Line 17) and run the code again.

What color did you choose?

- Why did we choose the number 360 on Line 22?