

# 練習：烏龜繪圖

- ◆ 使用turtle模組繪製下列圖案
  - ◆ 正N邊形
  - ◆ N個同心圓

```
TurtleDraw.py - D:\Python\Solutions\Ch6\TurtleDraw.py (3...
File Edit Format Run Options Window Help
import turtle

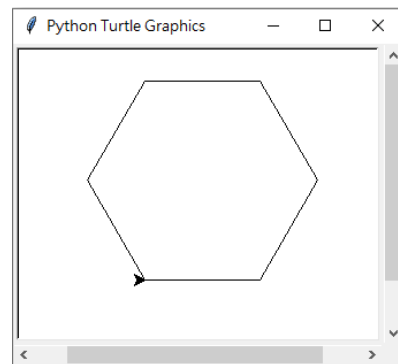
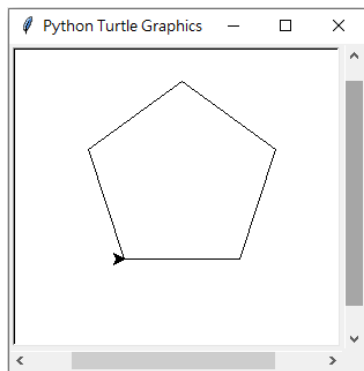
sides = int(input('繪製正N邊形, 輸入N:'))
angle = 360/sides
print(angle)

p = turtle.Turtle()
p.penup()
p.goto(-50, -50)
p.pendown()
for i in range(sides):
    p.forward(100)
    p.left(angle)

Ln: 16 Col: 0
```

```
Python 3.8.1 Shell
File Edit Shell Debug Options Window Help
>>>
= RESTART: D:\Python\Solutions
\Ch6\TurtleDraw.py
繪製正N邊形, 輸入N:5
72.0
>>>
= RESTART: D:\Python\Solutions
\Ch6\TurtleDraw.py
繪製正N邊形, 輸入N:6
60.0
>>> |

Ln: 9 Col: 4
```



```
*TurtleDraw.py - D:\Python\Solutions\Ch6\TurtleDraw.py (3.8.1)*
File Edit Format Run Options Window Help
import turtle

circleNum = int(input('繪製N個同心圓，輸入N:'))

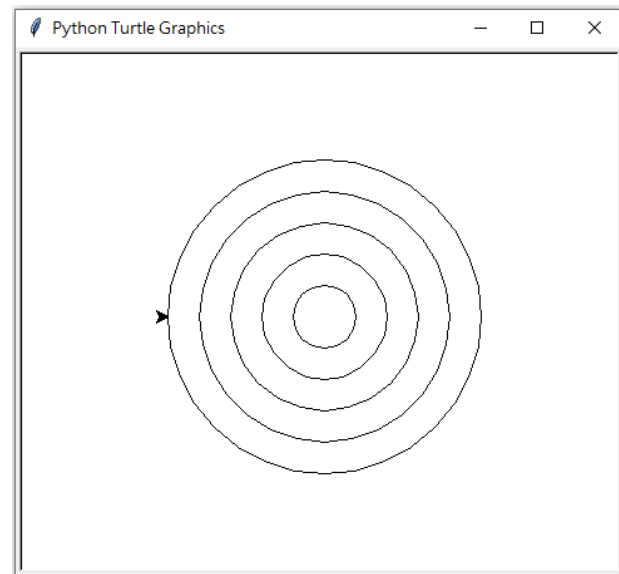
p = turtle.Turtle()

for i in range(1, circleNum+1):
    p.penup()
    p.backward(25)
    p.right(90)
    p.pendown()
    p.circle(25*i)
    p.left(90)
```

Ln: 14 Col: 0

```
Python 3.8.1 Shell
File Edit Shell Debug Options Window Help
>>>
= RESTART: D:\Python\Solutions
\Ch6\TurtleDraw.py
繪製N個同心圓，輸入N:5
>>> |
```

Ln: 4 Col: 4



# 練習：英文字母接龍

- ◆ 撰寫英文字母接龍遊戲
  - ◆ 第二個英文單字開始字母必須是前一個英文單字的結尾字母
  - ◆ 有五次錯誤的機會

```
*Python 3.8.1 Shell*
File Edit Shell Debug Options Window Help
\\StringGame.py =====
字母接龍
請輸入字串:Hello
目前字串:Hello
請輸入-O-開始的字串:Orange
目前字串:Hello-Orange
請輸入-E-開始的字串:English
目前字串:Hello-Orange-English
請輸入-H-開始的字串:abc
輸入錯誤1次
目前字串:Hello-Orange-English
請輸入-H-開始的字串:|
```

Ln: 15 Col: 12

```
StringGame.py - D:\Python\Solutions\Ch6\StringGame.py (3.8.1)
File Edit Format Run Options Window Help
str_result=input('字母接龍\n請輸入字串:')
eCount=0
while(eCount<5):
    print('目前字串:%s' %str_result)
    str_in = input('請輸入-%s-開始的字串:' %str_result[-1].upper())
    if(str_in[0].lower()==str_result[-1].lower()):
        str_result+="-"+str_in
    else:
        eCount+=1
        print('輸入錯誤%d次' %eCount)
print('錯誤超過五次,遊戲結束!')
```

Ln: 13 Col: 0

```
*Python 3.8.1 Shell*
File Edit Shell Debug Options Window Help
\StringGame.py =====
字母接龍
請輸入字串:Hello
目前字串:Hello
請輸入-O-開始的字串:Orange
目前字串:Hello-Orange
請輸入-E-開始的字串:English
目前字串:Hello-Orange-English
請輸入-H-開始的字串:abc
輸入錯誤1次
目前字串:Hello-Orange-English
請輸入-H-開始的字串:
```

Ln: 15 Col: 12



# 練習：英文單字出現次數

- ◆ 選擇一首英文歌曲，計算單字及出現次數
  - ◇ 忽略大小寫差異，全部轉換為小寫
  - ◇ 去除標點符號
  - ◇ 轉換為list
  - ◇ 以dict 儲存
    - 英文單字為key，出現次數為value

```
song = ""Are you sleeping, are you sleeping, Brother John, Brother John?  
Morning bells are ringing, morning bells are ringing.  
Ding ding dong, Ding ding dong.""
```

```
dict = {} # 空字典未來儲存單字計數結果
```

```
print("原始歌詞")
```

```
print(song)
```

```
# 將歌曲大寫字母改成小寫
```

```
songLower = song.lower()
```

```
# 歌曲改為小寫
```

```
print("小寫歌詞")
```

```
print(songLower)
```

```
# 去掉標點符號
```

```
for ch in songLower:
```

```
    if ch in ".,?":
```

```
# 將歌曲的標點符號用空字元取代
```

```
        songLower = songLower.replace(ch, '')
```

```
print("去掉標點符號")
```

```
print(songLower)
```

```
# 將歌曲字串轉成串列
```

```
songList = songLower.split()
```

```
print("轉換成串列")
```

```
print(songList)
```

```
# 列印歌曲串列
```

```
# 將歌曲串列處理成字典
```

```
for wd in songList:
```

```
    if wd in dict:
```

```
# 檢查此字是否已在字典內
```

```
        dict[wd] += 1
```

```
# 累計出現次數
```

```
    else:
```

```
        dict[wd] = 1
```

```
# 第一次出現的字建立此鍵與值
```

```
print("單字及出現次數")
```

```
print(dict)
```

```
# 列印字典
```

```
Python 3.8.1 Shell
File Edit Shell Debug Options Window Help

===== RESTART: D:\Python\Solutions\Ch6\wordCount.py =====
原始歌詞
Are you sleeping, are you sleeping, Brother John, Brother John?
Morning bells are ringing, morning bells are ringing.
Ding ding dong, Ding ding dong.
小寫歌詞
are you sleeping, are you sleeping, brother john, brother john?
morning bells are ringing, morning bells are ringing.
ding ding dong, ding ding dong.
去掉標點符號
are you sleeping are you sleeping brother john brother john
morning bells are ringing morning bells are ringing
ding ding dong ding ding dong
轉換成串列
['are', 'you', 'sleeping', 'are', 'you', 'sleeping', 'brother', 'john', 'brother', 'john', 'morning', 'bells', 'are', 'ringing',
'morning', 'bells', 'are', 'ringing', 'ding', 'ding', 'dong', 'ding', 'ding', 'dong']
單字及出現次數
{'are': 4, 'you': 2, 'sleeping': 2, 'brother': 2, 'john': 2, 'morning': 2, 'bells': 2, 'ringing': 2, 'ding': 4, 'dong': 2}
>>> |
```

Ln: 21 Col: 4