PythonChallenge 9번

Xero

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2011-10-29

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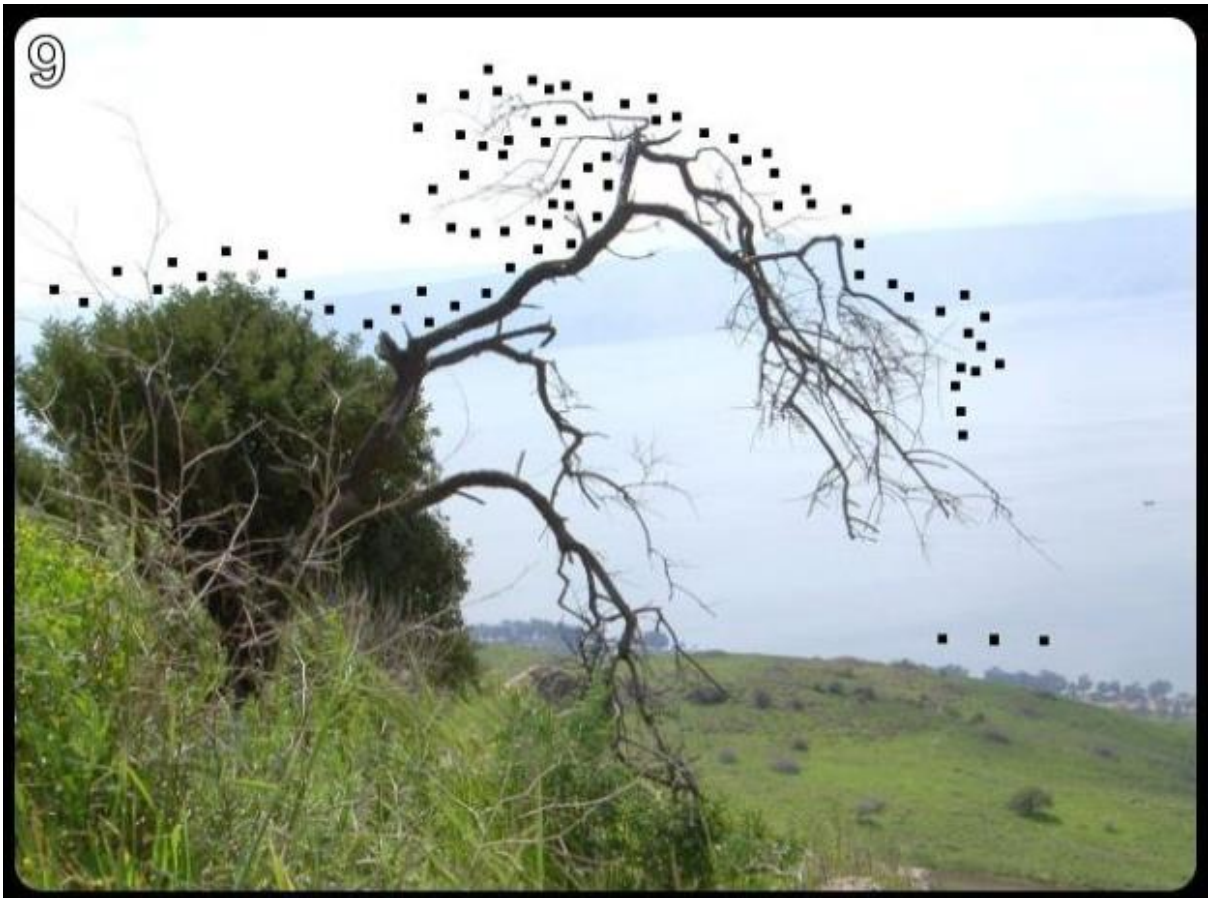
URL : http://www.pythonchallenge.com/pc/return/good.html

다음과 같은 그림이 있다.
페이지의 제목을 보니 connect the dots 로, 점들을 이으란 말이다.



소스를 보니 주석으로 다음과 같은 것이 있었다.

<!--
first+second=?

first:
146,399,163,403,170,393,169,391,166,386,170,381,170,371,170,355,169,346,167,335,
170,329,170,320,170,310,171,301,173,290,178,289,182,287,188,286,190,286,192,291,
194,296,195,305,194,307,191,312,190,316,190,321,192,331,193,338,196,341,197,346,
199,352,198,360,197,366,197,373,196,380,197,383,196,387,192,389,191,392,190,396,
189,400,194,401,201,402,208,403,213,402,216,401,219,397,219,393,216,390,215,385,

215,379,213,373,213,365,212,360,210,353,210,347,212,338,213,329,214,319,215,311,
215,306,216,296,218,290,221,283,225,282,233,284,238,287,243,290,250,291,255,294,
261,293,265,291,271,291,273,289,278,287,279,285,281,280,284,278,284,276,287,277,
289,283,291,286,294,291,296,295,299,300,301,304,304,320,305,327,306,332,307,341,
306,349,303,354,301,364,301,371,297,375,292,384,291,386,302,393,324,391,333,387,
328,375,329,367,329,353,330,341,331,328,336,319,338,310,341,304,341,285,341,278,
343,269,344,262,346,259,346,251,349,259,349,264,349,273,349,280,349,288,349,295,
349,298,354,293,356,286,354,279,352,268,352,257,351,249,350,234,351,211,352,197,
354,185,353,171,351,154,348,147,342,137,339,132,330,122,327,120,314,116,304,117,
293,118,284,118,281,122,275,128,265,129,257,131,244,133,239,134,228,136,221,137,
214,138,209,135,201,132,192,130,184,131,175,129,170,131,159,134,157,134,160,130,
170,125,176,114,176,102,173,103,172,108,171,111,163,115,156,116,149,117,142,116,
136,115,129,115,124,115,120,115,115,117,113,120,109,122,102,122,100,121,95,121,8
9,115,87,110,82,109,84,118,89,123,93,129,100,130,108,132,110,133,110,136,107,138,
105,140,95,138,86,141,79,149,77,155,81,162,90,165,97,167,99,171,109,171,107,161,
111,156,113,170,115,185,118,208,117,223,121,239,128,251,133,259,136,266,139,276,
143,290,148,310,151,332,155,348,156,353,153,366,149,379,147,394,146,399

second:
156,141,165,135,169,131,176,130,187,134,191,140,191,146,186,150,179,155,175,157,
168,157,163,157,159,157,158,164,159,175,159,181,157,191,154,197,153,205,153,210,
152,212,147,215,146,218,143,220,132,220,125,217,119,209,116,196,115,185,114,172,
114,167,112,161,109,165,107,170,99,171,97,167,89,164,81,162,77,155,81,148,87,140,
96,138,105,141,110,136,111,126,113,129,118,117,128,114,137,115,146,114,155,115,
158,121,157,128,156,134,157,136,156,136
-->

점들의 좌표 같은데, x1, y1, x2, y2 ... 형식으로 배열되어 있을 것이다.
8번 문제에서는 Image를 import 시켰는데 이번에는 ImageDraw 를 import 시켰다.
ImageDraw의 line 함수로 좌표를 입력해 선을 그었다.

다음과 같이 코딩하였다.

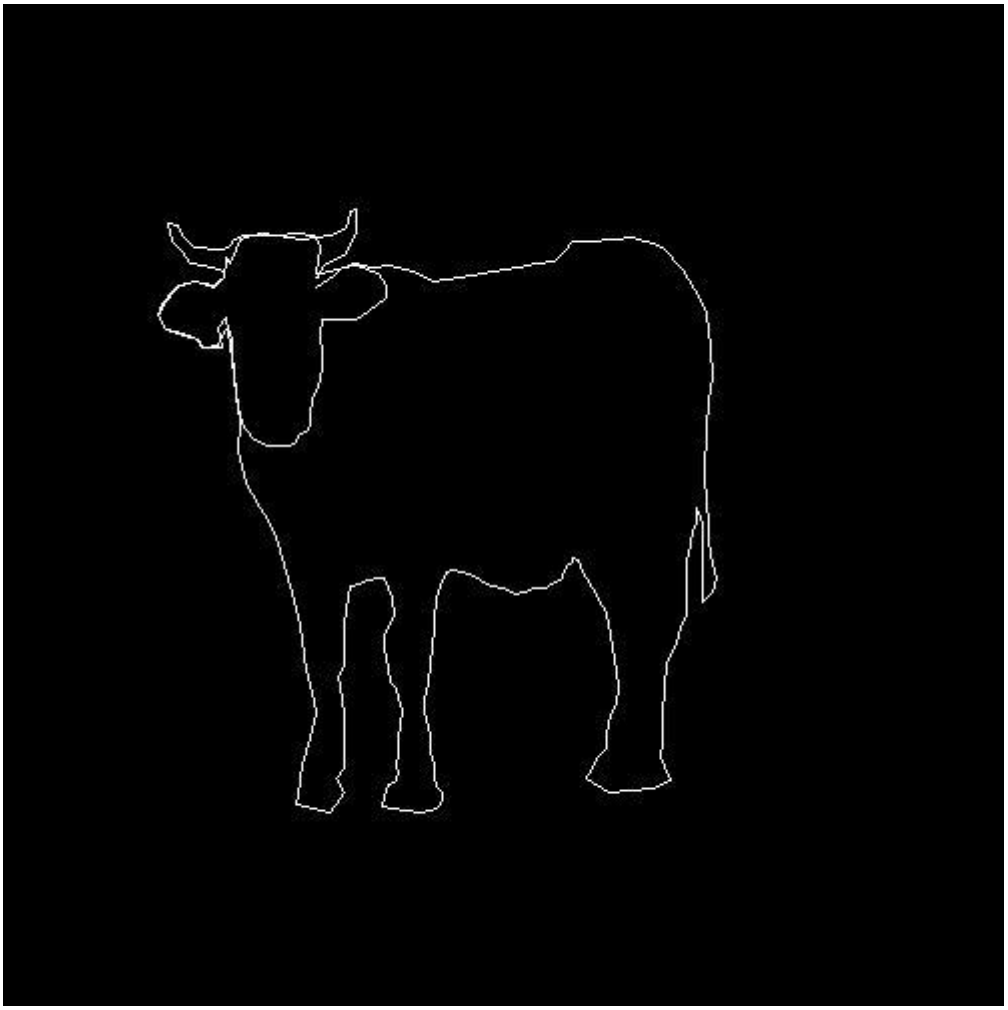
```
>>> import Image,ImageDraw
>>> first=[146,399,163,403,170,393,169,391,166,386,170,381,170,371,170,355,169,3
46,167,335,170,329,170,320,170,310,171,301,173,290,178,289,182,287,188,286,190,2
86,192,291,194,296,195,305,194,307,191,312,190,316,190,321,192,331,193,338,196,3
41,197,346,199,352,198,360,197,366,197,373,196,380,197,383,196,387,192,389,191,3
92,190,396,189,400,194,401,201,402,208,403,213,402,216,401,219,397,219,393,216,3
90,215,385,215,379,213,373,213,365,212,360,210,353,210,347,212,338,213,329,214,3
19,215,311,215,306,216,296,218,290,221,283,225,282,233,284,238,287,243,290,250,2
91,255,294,261,293,265,291,271,291,273,289,278,287,279,285,281,280,284,278,284,2
76,287,277,289,283,291,286,294,291,296,295,299,300,301,304,304,320,305,327,306,3
32,307,341,306,349,303,354,301,364,301,371,297,375,292,384,291,386,302,393,324,3
91,333,387,328,375,329,367,329,353,330,341,331,328,336,319,338,310,341,304,341,2
85,341,278,343,269,344,262,346,259,346,251,349,259,349,264,349,273,349,280,349,2
88,349,295,349,298,354,293,356,286,354,279,352,268,352,257,351,249,350,234,351,2
11,352,197,354,185,353,171,351,154,348,147,342,137,339,132,330,122,327,120,314,1
16,304,117,293,118,284,118,281,122,275,128,265,129,257,131,244,133,239,134,228,1
36,221,137,214,138,209,135,201,132,192,130,184,131,175,129,170,131,159,134,157,1
34,160,130,170,125,176,114,176,102,173,103,172,108,171,111,163,115,156,116,149,1
17,142,116,136,115,129,115,124,115,120,115,115,117,113,120,109,122,102,122,100,1
21,95,121,89,115,87,110,82,109,84,118,89,123,93,129,100,130,108,132,110,133,110,
136,107,138,105,140,95,138,86,141,79,149,77,155,81,162,90,165,97,167,99,171,109,
171,107,161,111,156,113,170,115,185,118,208,117,223,121,239,128,251,133,259,136,
266,139,276,143,290,148,310,151,332,155,348,156,353,153,366,149,379,147,394,146,
399]
>>> second=[156,141,165,135,169,131,176,130,187,134,191,140,191,146,186,150,179,
155,175,157,168,157,163,157,159,157,158,164,159,175,159,181,157,191,154,197,153,
205,153,210,152,212,147,215,146,218,143,220,132,220,125,217,119,209,116,196,115,
185,114,172,114,167,112,161,109,165,107,170,99,171,97,167,89,164,81,162,77,155,8
1,148,87,140,96,138,105,141,110,136,111,126,113,129,118,117,128,114,137,115,146,
114,155,115,158,121,157,128,156,134,157,136,156,136]
>>> im=Image.new('RGB',(500,500))
>>> draw=ImageDraw.Draw(im)
>>> for i in range(0,len(first),2):
        draw.line(first[i:i+4])

>>> for j in range(0,len(second),2):
        draw.line(second[j:j+4])

>>> im.save('C:/Users/Sonic/Desktop/Answer.jpg')
```

line함수는 (x1,y1,x2,y2)를 입력 받아 x1,y1 에서 x2,y2로 선을 그으므로 for를 2씩 점프시키게 하고 슬라이싱을 이용해 4개를 선택하도록 했다.
그리고 선을 다 그은 후 save함수로 Answer.jpg 로 저장시켰다.

Answer.jpg 를 열어보면 다음과 같이 황소가 보인다.
황소는 영어로 bull 이므로 bull.html을 입력하자 다음 문제로 넘어갈 수 있었다.



URL : http://www.pythonchallenge.com/pc/return/bull.html