What did the computer do at lunchtime?

Had a byte!

Source: https://www.ducksters.com/jokes/computer.php

Thank you, Hassan!

CMPT 120

Lecture 26 – Practice Exam 7
In-Class Activity

• Our in-class activity #7 -> 1%
  • Write your answer to question ____ on the provided sheet of paper
  • Write your lastname, firstname and student number
  • At the end of today’s class, hand in your sheet of paper in the appropriate pile:
    • **Pile 1** -> if your lastname start with a letter that is between ‘A’ and ‘L’
      • **Pile 1** is on your left-hand side of the classroom
    • **Pile 2** -> if your lastname start with a letter that is between ‘M’ to letter ‘Z’
      • **Pile 2** is on your right-hand side of the classroom

Course grading scheme on our course website: **Best 7 in-class exercises out of 10: 1% each, for a total of 7%**
Theory and Understanding

Try to answer the questions 1st without using your computer, then confirm your answer using IDLE!
Question 1 - Comments!

- Considering the Python code fragment below, which comment would be the most descriptive Comment 1 or Comment 2?

```python
33 for i in range(height):
34     for j in range(width):
35         r = imageKidGreen[i,j][0]
36         g = imageKidGreen[i,j][1]
37         b = imageKidGreen[i,j][2]
```

Comment 1:

# Create a nested for loop using range

Comment 2:

# Go through each pixel of A

assuming A means `imageKidGreen`
Question 2

If $w = 17$ and $h = 18$ and $(\_, \_)$ is a tuple with the syntax (column, row) ...

a. where is the pixel $\text{my_image}[10, 0]$?
b. where is the pixel $(4, 12)$?
c. where is the pixel $(17, 18)$?
d. where is the pixel $\text{my_image}[18, 17]$?
e. What is the location of the pink pixel?
f. What is the location of the green pixel?

For e. and f., express the location using both syntaxes seen above.
Coding

Try to solve the problem (i.e., write your Python program) 1st **on a piece of paper without using your computer**!
Question 3

Step 1 - Problem Statement
Imagine the file SomeSymbols.txt contains the following:

```
W
S
E
0
```

Write a program that reads these four symbols into four variables: `symbol1`, `symbol2`, `symbol3`, `symbol4`, all of `str` type.

Requirement
The content of these four variables must be such that

```
print(f'{symbol1},{symbol2},{symbol3},{symbol4}')
```

produces `W, S, E, 0` on the computer monitor screen, where all fours symbols are printed on one line.
Question 4

Step 1 - Problem Statement
Imagine the file `myMaze.txt` contains the following:

```
WWWWWWWWWWWWWWWW
E 0 W 0 W 0 0 0 W 0 0 0 0 W W 0 0 0 W
W 0 W 0 W W W 0 W W W 0 W 0 W 0 W W W
W 0 0 0 W W 0 0 W 0 0 0 0 0 0 0 0 0 W
W 0 W 0 0 0 W 0 W 0 W W W 0 W 0 W W W
W 0 W 0 W W W 0 W W W W W W W 0 0 W W
W W W 0 W W W W W 0 0 0 0 0 0 0 W W W
W W W 0 0 0 0 0 0 0 0 W W W 0 W 0 0 W W
W 0 W 0 W W W W W 0 W W W 0 W 0 W W W
W 0 0 0 W 0 0 0 0 0 0 0 W 0 W 0 0 0 S
```

Write a program that reads this into a variable that is a list of lists and prints it as a maze (grid).
Step 1 - Problem Statement
Write a function that returns the colour of a given pixel as a string (using the table below)

- **Sample input:** (0, 255, 0)
- Expecting the function to return: “green”

**Requirement:**
- You must use a dictionary
- The pixel is expressed as a tuple (r,g,b)

**Possible return values:** “red”, “green”, “blue”, “white”, “black”, “yellow”, “magenta” or “cyan”