What did the computer do at lunchtime?

Had a byte!

Source: https://www.ducksters.com/jokes/computer.php
In-Class Activity

• Our in-class activity #7 -> 1%
  • Write your answer to question _5_ 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
for i in range(height):
    for j in range(width):
        r = imageKidGreen[i,j][0]
        g = imageKidGreen[i,j][1]
        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 
\texttt{my\_image[10, 0]}?

b. where is the pixel \((4, 12)\)?

c. where is the pixel \((17, 18)\)?

d. where is the pixel 
\texttt{my\_image[18, 17]}?

e. What is the location of the pink pixel? \((10, 8), \texttt{my\_image[10,8]}\)

f. What is the location of the green pixel? \((14, 13), \texttt{my\_image[14,13]}\)

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

Try to solve the problem (i.e., write your Python program) 1\textsuperscript{st} 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.
Step 1 - Problem Statement

Imagine the file `myMaze.txt` contains the following:

```
W W W W W W W W W W W W W W
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 0 0 W
W 0 W 0 0 0 W 0 W 0 W 0 W W W 0 W W W
W 0 W 0 W W 0 0 W 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 0 W W W
W W W 0 0 0 0 0 0 0 W W W 0 W 0 0 W 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 W 0 W 0 0 0 S
W W W W W W W W W W W W W W W W
```

Write a program that reads this into a variable that is a list of lists and prints it as a maze (grid).
Question 5

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”