

A08

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Save Function

- The save function looks for 3 letters at the end of the file ram to make sure it is supposed to be compressed. Then it adds the header RAM to the file if it is so that the open file will know to operate on the file.
- It then goes through the img and assigns values greater than 128 a 1 and values lower a 0.
- Next it looks at the new 1 and 0 values and assigns a number to the number of 1s or 0s in a row with a ! or @ sign following the end respectively.
- Technically the compressed file has a series of strings so a python string compression library could compress it even further.

Open Function

- The open function takes the compressed numbers and ! and @ signs and converts it back to the xqcd image. However, it first checks to make sure the header RAM is at the beginning of the file.
- If it is it goes through the file bit by bit and converts the numbers and ! and @ symbols back to 1s and 0s.
- Then it converts the 1s to 255 and pads the array to get a correct 2D array for the image shape.
- Lastly it reshapes the array into the image and shows the image.