1.1. Computers & Black and White Images
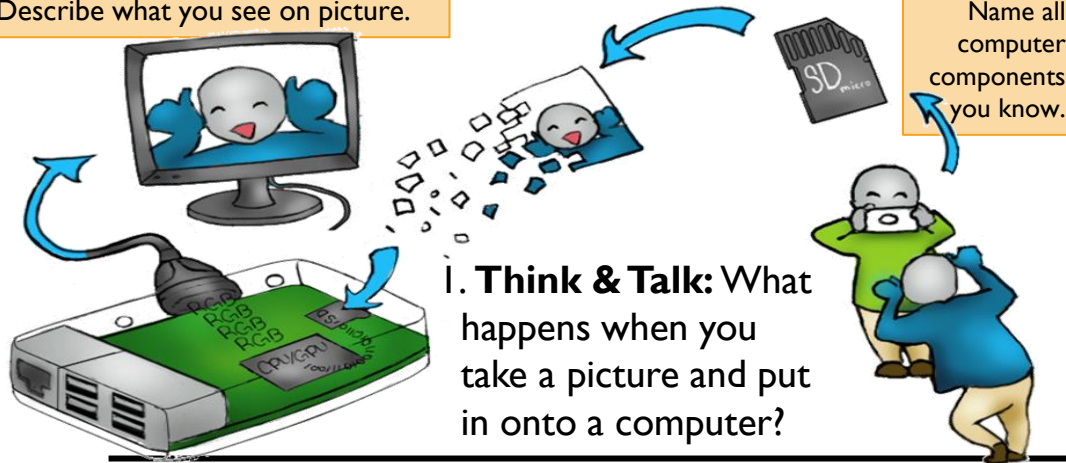
Describe what you see on picture.

Name all computer components you know.

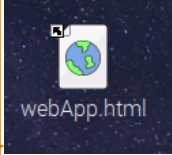1. **Think & Talk:** What happens when you take a picture and put in onto a computer?

2. To read an image, the computer sees it as a grid with many squares. Each square is a pixel. To form the image, each pixel has a numerical value linked to a color. For example, the images below have two colors. If color black is represented with '0' (zero) and white with '1' (one), **what would these images look like with numbers?**

Binary numbers have only two digits: 1 and 0
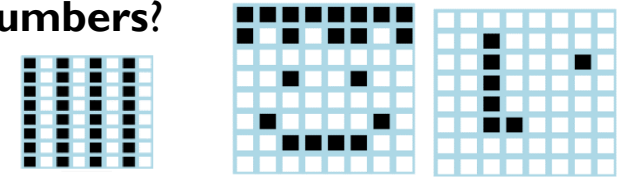
3. **Create** any image by filling in complete squares with black on paper grid. Then, translate the image information onto a computer, & think about the colors and location of colors

columns
x ↓ ↓ ↓ ↓ ↓
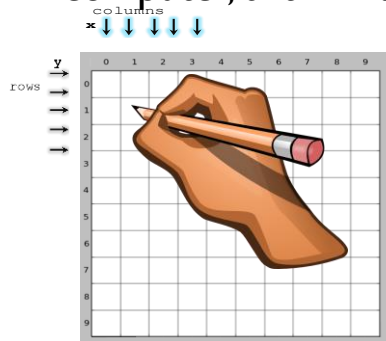
To enter the data, open by double clicking on the link on the desktop: **"WebApp.html"** that looks like this: **o**r go to:
http://aolme.unm.edu/app/

webApp.html

4. **Challenge**: Make 2 teams at your table. Each team designs an image and without showing it to the other team, the other team needs to create the same image using the computer.

See the 'i' and 'j' on WebApp? Which relates to the **rows** and **columns** of the images? To name the location of each pixel or square, say:
1R – 3C
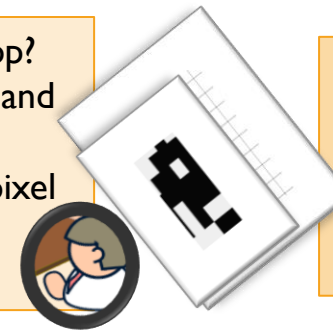
Note: change the size or number of rows and columns of the coordinate plane on WebApp at bottom of screen.

AOLME PROJECT - LEVEL 2- SESSION 1 - 2018