# Machine Vision

HW#2

Deadline: 2023/04/06 23:59

RVL Room 1421

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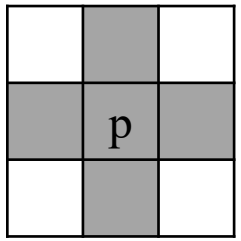
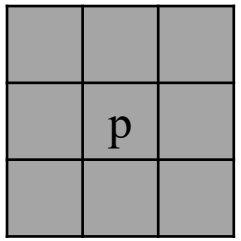
# HW#2

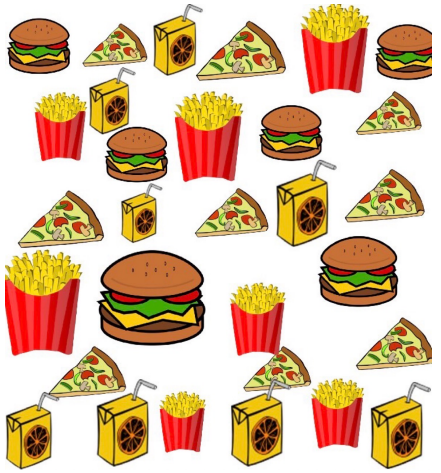
1. Component Labeling
   - Convert the color image to a binary image.
   - Labeling components using 4-connected and 8-connected.
   - Output color image and object number.



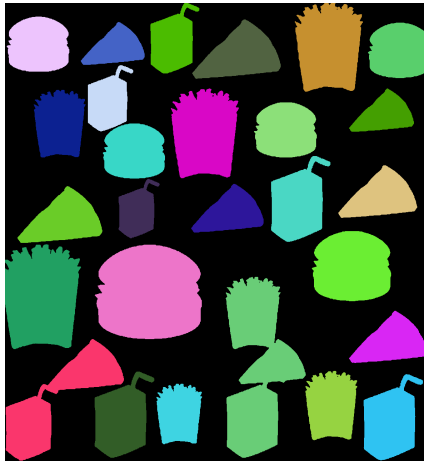

4-connected




8-connected



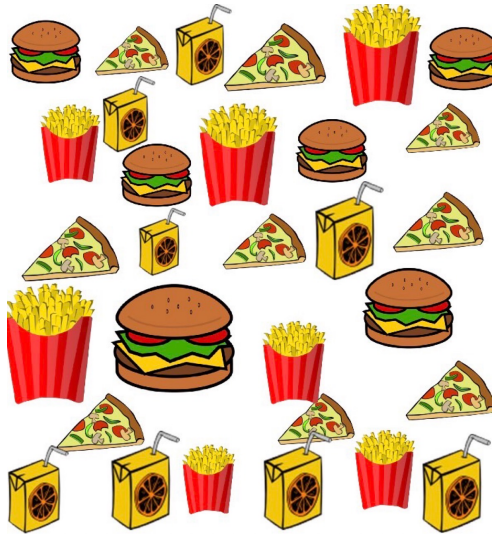
Input



Output

# HW#2

- Download images



# HW#2

- **Use OpenCV-2.x version**
- Allow use OpenCV for C/C++
  - Read, load, save, show: cvLoadImage, cvShowImage …
  - Define size of image: cvSize, cvGetSize
  - Define image: IplImage or Mat
- Not Allow use
  - Cannot use the function of OpenCV Lib to do the main part of homework.
  - Example:
    - cvtColor(image, gray, CV_RGB2GRAY);  // convert RGB to Gray

# HW#2

- Require for program
  - GUI to read, display input and result images is encouraged (but not required).
  - **Use C/C++**
  - Write homework on the one program (using class or subprogram).

# HW#2

- Grade
  - Program (80%)
  - Report (20%)

# HW#2

- Report needs:
  - Student ID
  - Name
  - Describe the main part of your method
  - Result images (12 pics) and object number
    - For each input image have 1 binary + 2 color output images

# HW#2

- Submit **studentID_hw2.zip** include:
  - The program source code and result images
  - The report (.pdf)
  - Mail to TAs
- **Deadline: 2023/04/06 23:59**
  - For each hour late, 10% of the total possible points will be deducted.
  - Don’t share your code with other students.