# CLPS 0950 Project Presentation

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# Our Project

- We chose to program a facial recognition generator that would be able to determine if what was shown was representative of a face or not
- We pulled from our knowledge of the brain, specifically in the fusiform face area (a region of the brain that responds most strongly to faces compared to other input)
- We wanted to code a series of instructions for the program to follow to decide if the features that appeared made up features of the face or not
- We focused on the idea of how the brain recognizes features before it sees a face
- The program would prompt ‘face detected’ or ‘no face detected’ if not.

```
    %mouth detection
    if image(even_center + even_eyelocal, even_eyelocal:even_center+even_center - even_eyelocal+1) ==0
        mouth_detected = 1;
    else
        mouth_detected = 0;
    end
end

if ((nose_detected == 1) & (eyes_detected ==1) & (mouth_detected ==1))
    face_detected = 1;
    disp ('Face detected')
elseif (nose detected == 0)
    face_detected = 0;
    disp ('There is no nose, no face detected')
elseif (eyes detected == 0)
    face_detected == 0;
    disp ('There are no eyes, no face detected')
elseif (mouth_detected == 0)
    face_detected = 0;
    disp ('There is no mouth, no face detected')
end
end
```

ive feedback

Used ‘display’ and ‘elseif’ statements in order to code for detecting a face/what makes a face be detected

# How We Did It

- To code for facial features we went through each part of the face
- We coded separately for the eyes, mouth and nose
- We were able to code for specific parts of the face so that if they all were detected then a face would be formed, prompting the ‘face detected’ result
- The project was also designed so that even if a facial feature appeared, but on an unusual part of the face, it would still detect it and show ‘face detected’
- The project represents the ‘features before face’ mechanism in the brain.

# What We Learned

- We learned how to properly code more complex functions
- We were able to figure out how to program the face generator so that it was able to be altered for other uses
- We made it so that it didn’t have a structure so rigid that other components couldn’t be played around with in order to change the style of the face
- We learned how to make different formats using ‘if, then’ statements