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## 1. Source code

```
.
 let grayscaleImg;
let sepiaImg;
let negativeImg;
function preload() {
  img = loadImage('img.jpeg');
function setup() {
  createCanvas(720, 720);
  img.resize(360, 360);
      grayscaleImg = createImage(img.width, img.height);
sepiaImg = createImage(img.width, img.height);
negativeImg = createImage(img.width, img.height);
       grayscaleImg.loadPixels();
sepiaImg.loadPixels();
negativeImg.loadPixels();
     img.loadPixels();
for (let y = 0; y < img.height; y++) {
    for (let x = 0; x < img.width; x++) {
      let index = (x + y * img.width) * 4;
      let r = img.pixels[index];
      let g = img.pixels[index + 1];
      let b = img.pixels[index + 2];
      let gray = 0.21 * r + 0.72 * g + 0.07 * b;
      grayscaleImg.pixels[index] = gray;
      grayscaleImg.pixels[index + 1] = gray;
      grayscaleImg.pixels[index + 2] = gray;
      grayscaleImg.pixels[index + 3] = 255;</pre>
                   let rSepia = min(255, (0.393 * r + 0.769 * g + 0.189 * b));
let gSepia = min(255, (0.349 * r + 0.686 * g + 0.168 * b));
let bSepia = min(255, (0.272 * r + 0.534 * g + 0.131 * b));
sepiaImg.pixels[index] = rSepia;
sepiaImg.pixels[index + 1] = gSepia;
sepiaImg.pixels[index + 2] = bSepia;
sepiaImg.pixels[index + 3] = 255;
                   negativeImg.pixels[index] = 255 - r;
negativeImg.pixels[index + 1] = 255 - g;
negativeImg.pixels[index + 2] = 255 - b;
negativeImg.pixels[index + 3] = 255;
      grayscaleImg.updatePixels();
sepiaImg.updatePixels();
negativeImg.updatePixels();
       textSize(20);
textAlign(CENTER);
textFont('Arial');
       image(img, 0, 0);
text('ASLI', img.width / 2, 20);
       image(grayscaleImg, img.width, 0);
text('GRAYSCALE', img.width + grayscaleImg.width / 2, 20);
      image(sepiaImg, 0, img.height);
text('SEPIA', sepiaImg.width / 2, img.height + 20);
image(negativeImg, img.width, img.height);
text('NEGATIVE', img.width + negativeImg.width / 2, img.height + 20);
```

## 2. Hasil p5.js

