

Rotating_Shapes_Advanced_

```
//Rotating Shapes (Advanced)  
//includes pushMatrix() and popMatrix() commands  
//Mr. H.
```

```
float angle;
```

```
void setup() {  
  size(600, 600);  
  noStroke();  
  fill(255);  
  rectMode(CENTER);  
}
```

```
void draw() {  
  background(51);
```

```
  fill(255);  
  textAlign(CENTER);  
  textSize(32);  
  text("Selective Rotation Of", width/2, 50);  
  text("Shapes And Text", width/2, 80);
```

```
  //the pushMatrix() and popMatrix() commands isolate  
  //the code between them from the rest of the program  
  pushMatrix();
```

```
  //rotations occur around top left corner  
  //must translate to rotate around center of window  
  translate(width/2, height/2);
```

```
  //rotation of angle in radians  
  rotate(radians(angle));
```

```
  //creates a white square in center of window  
  fill(255);  
  rect(0, 0, 240, 240);
```

```
  //places text on top of white square  
  fill(0);  
  textSize(24);  
  textAlign(CENTER);  
  text("Press Mouse", 0, -30);  
  text("To", 0, 0);  
  text("Reverse Rotation", 0, 30);
```

```
  //increments angle if mouse is pressed  
  if (mousePressed) {
```

```
    angle = angle - 1;  
  } else {  
    angle = angle + 1;  
  }  
  popMatrix();
```

```
  fill(255);  
  text("Angle = "+int(angle)+"°",width/2,550);
```

```
//states coterminal angle between 0° and 360°
```

```
if (angle >= 360){  
  angle = angle - 360;  
}  
if (angle <= 0){  
  angle = angle + 360;  
}  
}
```