

Rotating_Shape_Mouse_Controlled

```
//Rotating Shapes (Mouse Controlled)  
//includes map(input,minInput,maxInput,minOutput,maxOutput)  
//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);
```

```
//maps angle to the x position of mouse  
angle = map(mouseX,0,600,0,360);
```

```
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;
```

```
}
```

```
}
```