
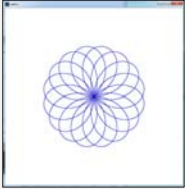
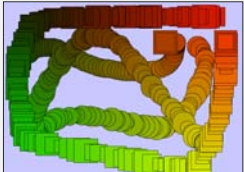
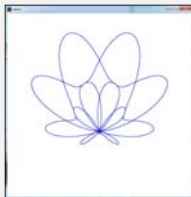



1

If-statements



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THEREST.pptx

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Your Code Often Wants to Test Something and Make a Decision Based On It

```
if( condition )
{
    do this;
    do that;
}
```

These Operators Make up the Possible Conditions:

| | |
|-----------------------|-----------------------------|
| <code><</code> | Is less than |
| <code><=</code> | Is less than or equal to |
| <code>></code> | Is greater than |
| <code>>=</code> | Is greater than or equal to |
| <code>==</code> | Is equal to |
| <code>!=</code> | Is not equal to |
| && And | |
| Or | |




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Example #1

```
int x = 100;
fill( 0, 255, 0 );
for( int y = 0; y < 800; y = y + 100 )
{
    if( y >= 200 )
    {
        fill( 255, 0, 0 );
    }
    rect( x, y, 200, 100 );
}
```




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Example #2

```
fill( 0, 255, 0 );
for( int y = 0; y < 800; y = y + 100 )
{
    int x = y / 5;
    if( x < 100 && y >= 200 )
    {
        fill( 255, 0, 0 );
    }
    rect( x, y, 200, 100 );
}
```



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**Your Code Often Wants to Test Something and Make a Decision
Based On It or the Opposite Condition**

5

```
if( condition )
{
    do this;
}
else
{
    do that;
}
```



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**Your Code Often Wants to Test Something and Make a Decision
Based On It or on Other Conditions**

6

```
if( condition )
{
    do this;
}
else if( another_condition )
{
    do it;
}
else
{
    do that;
}
```



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**Your Code Often Wants to Test Something and Make a Decision
Based On It or Lots of Alternatives**

7

```
if( key == 'r' )
{
    fill( 255, 50, 50 );
}
else if( key == 'g' )
{
    fill( 50, 255, 50 );
}
else if( key == 'b' )
{
    fill( 50, 50, 255 );
}
else
{
    fill( 100, 100, 100 );
}
```



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**Your Code Often Wants to Test Something and Make a Decision
Based On It or Lots of Alternatives -- a Better Way**

8

```
switch( key )
{
    case 'r':
        fill( 255, 50, 50 );
        break;

    case 'g':
        fill( 50, 255, 50 );
        break;

    case 'b':
        fill( 50, 50, 255 );
        break;

    default:
        fill( 100, 100, 100 );
}
```



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Some of Processing's Variables Already Have the Condition Built-In

9

```
void  
draw( )  
{  
  stroke( 0, 0, 0 );  
  fill( 255, 50, 50 );  
  if( mousePressed )  
  {  
    rect( mouseX, mouseY, 50, 20 );  
  }  
}
```

mousePressed is a built-in variable that is always telling you if a mouse button is currently pressed

mouseX and **mouseY** are built-in variables that are always telling you where the mouse cursor is