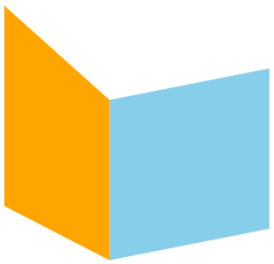
Solution - Building a Cube

Cube has 6 faces. **Make sure you have coded the first two sides of the cube!** You already built two faces as follows:

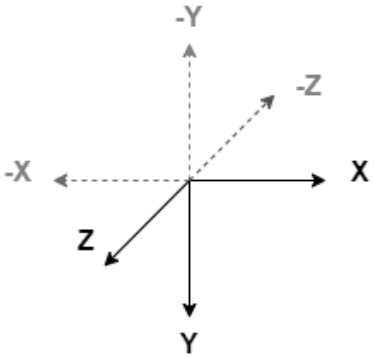
```
.one{
    background-color: skyblue;
}

.two{
    background-color: orange;
    transform: rotateY(90deg) translateZ(-100px)
translateX(-100px);
}
```

Currently, the cube has two sides - the back side and the left side. It looks like



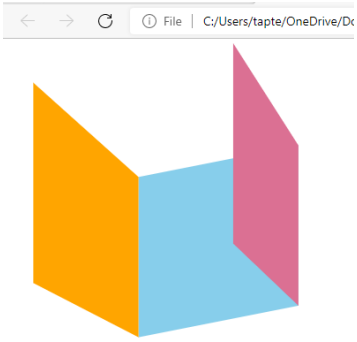
Now you'll be building the rest of the faces. You can generate these faces in any order.

Note: The cartesian coordinates that CSS uses has their Y-axis inverted as shown:



Face 3 (Right Side)

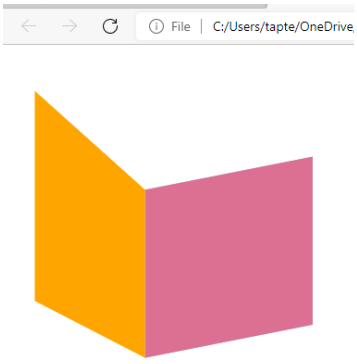
We aim at making this

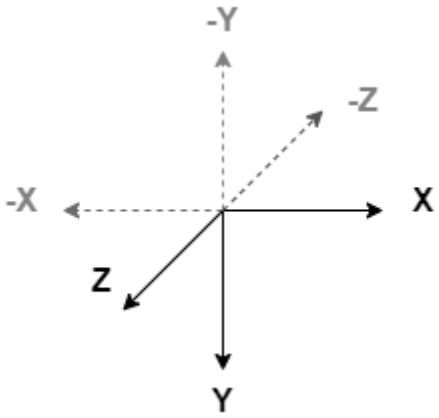


Step 1: Give background color to the face 3.

```
.three{
    background-color: palevioletred;
}
```

It'll generate:
(The pink side covers the blue side in the XY plane, hence the blue side is not visible yet.)

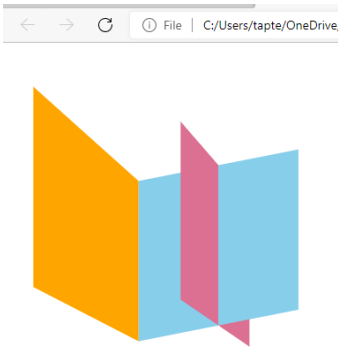


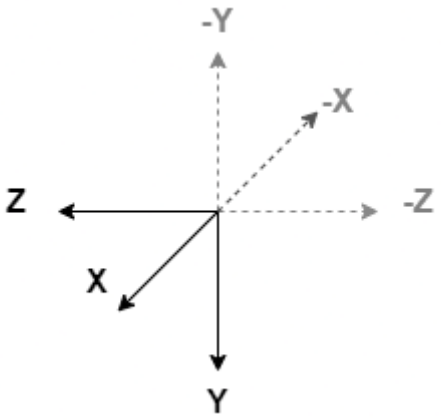


Step 2: Rotate the pink side along the Y direction.

```
transform: rotateY(-90deg) ;
```

The cube will look as shown.
The axis of the pink face will rotate as shown.



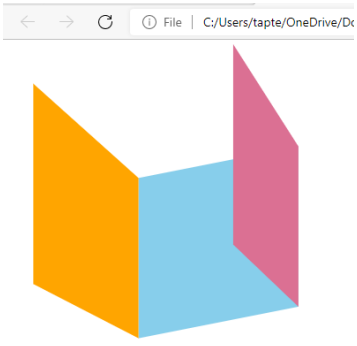


Step 3: Now translate the pink face 100px towards the -ve Z direction, and 100px towards the +ve X direction.

The final code will be

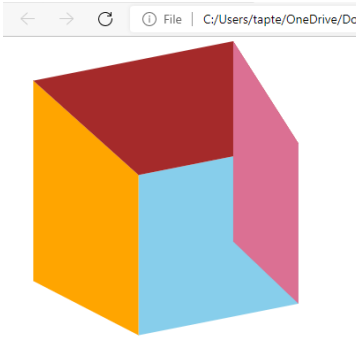
```
.three{
  background-color: palevioletred;
  transform: rotateY(-90deg) translateZ(-100px) translateX(100px);
}
```

Final cube after adding face 3



Face 4 (Top Side)

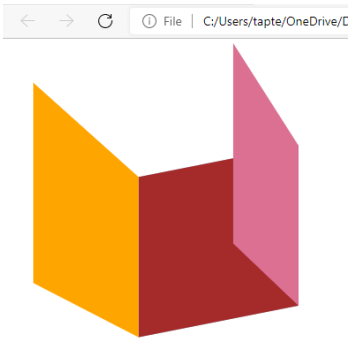
We aim at making this

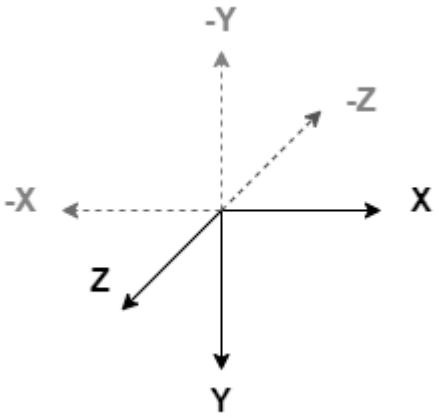


Step 1: Give background color to the face 4

```
.four{
    background-color: brown;
}
```

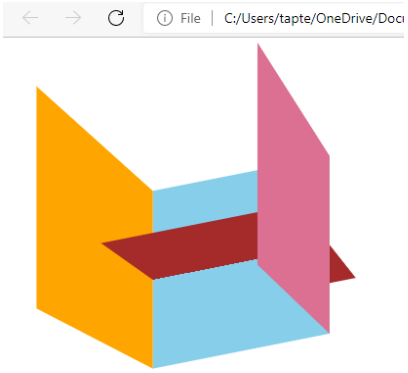
It'll generate:
(The brown side covers the blue side in the XY plane, hence the blue side is not visible yet.)

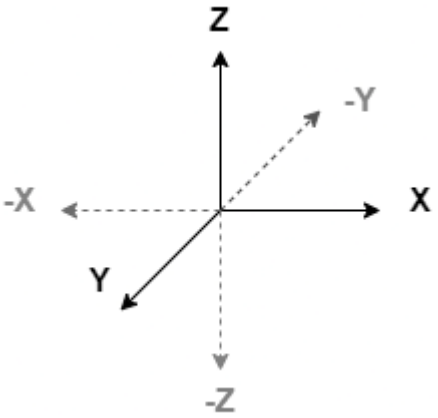




Step 2: Rotate the brown side along the X-direction.

```
transform: rotateX(90deg) ;
```



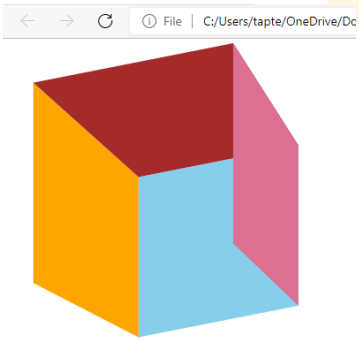


Step 3: Now translate the brown side 100px both in Y and Z directions

Final code:

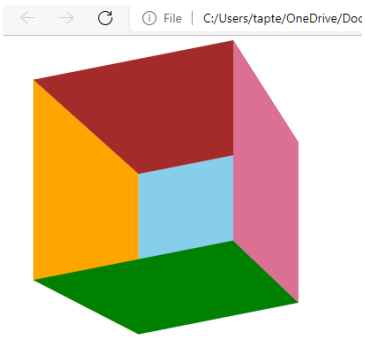
```
.four{
   background-color: brown;
   transform: rotateX(90deg) translateY(100px) translateZ(100px);
}
```

Final cube after adding Face 4



Face 5 (Bottom Side)

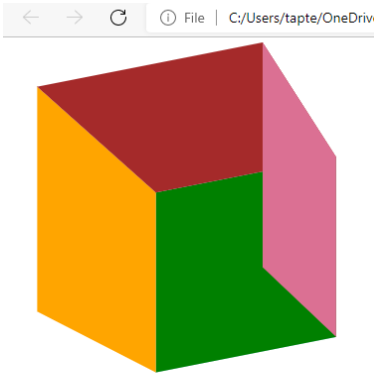
We aim at making this

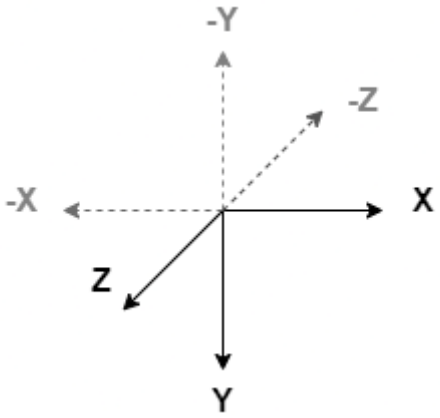


Step 1: Give background color to the face 5

```
.five{
    background-color: green;
}
```

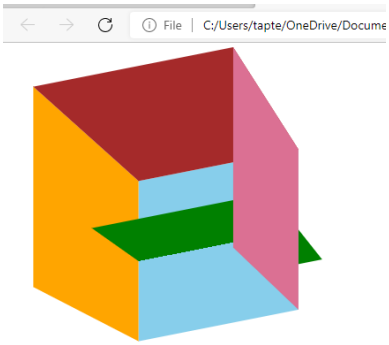
It'll generate:
(The green side covers the blue side in the XY plane, hence the blue side is not visible yet.)

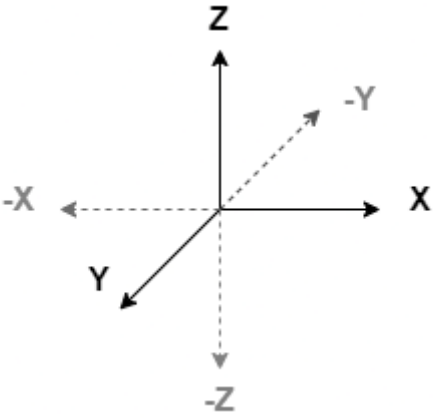




Step 2: Rotate it along the X-axis

```
transform: rotateX(90deg) ;
```



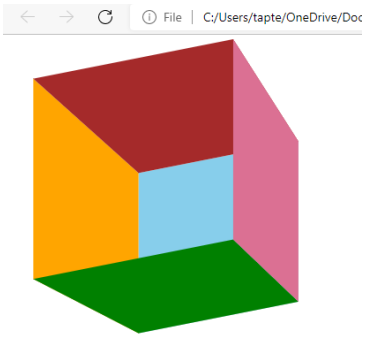


Step 3: Translate it -100px in Z-direction and 100px in Y-direction

Final code:

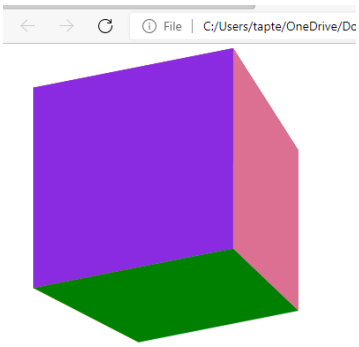
```
.five{
   background-color: green;
   transform: rotateX(90deg) translateZ(-100px) translateY(100px);
}
```

Final cube after adding face 5



Face 6 (Front Side)

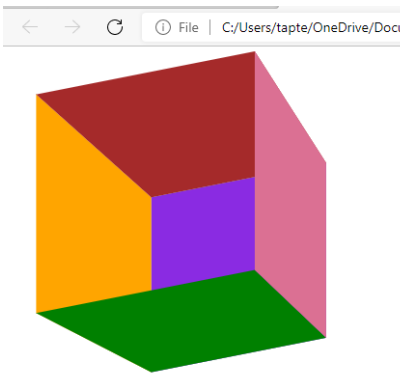
We aim at making this

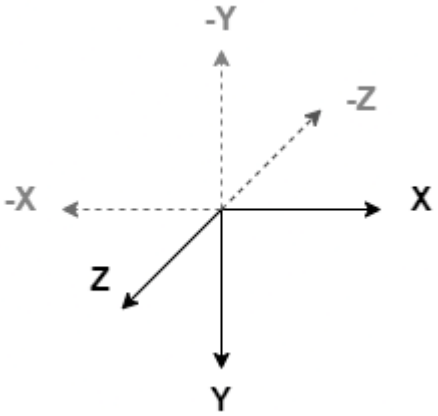


Step 1: Give background color to the face 6

```
.six{
    background-color: blueviolet;
}
```

It'll generate:
(The blueviolet side covers the blue side in the XY plane, hence the blue side is not visible yet.)



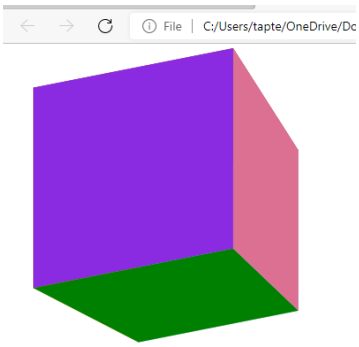


Step 2: Translate it along the Z-axis

Final Code:

```css
.six{
    background-color: blueviolet;
    transform: translateZ(200px);
}
```

Our 3D Cube is ready!!



NOTE:

We can rotate a cube using CSS. Although we should avoid adding such functionalities using CSS. The rotation can be achieved using javascript which you'll learn later.