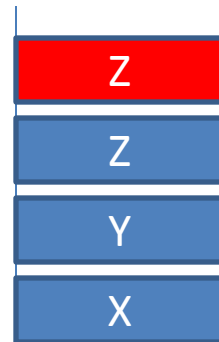


OpenGL Stack Implementation

Push() and Pop()

- Push()
 1. Copy what's on top of the stack
 2. Push that copy on top of the stack
- Pop()
 - Pop whatever on top of the stack



LoadIdentity()

Push()

T()

R()

Push()

S()

R()

Teapot()

Pop()

Push()

R()

Cube()

Pop()

Pop()

LoadIdentity()

Push()

T()

R()

Push()

S()

R()

Teapot()

Pop()

Push()

R()

Cube()

Pop()

Pop()

Top →  Identity

LoadIdentity()

Push()

T()

R()

Push()

S()

R()

Teapot()

Pop()

Push()

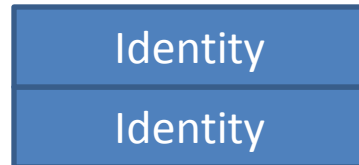
R()

Cube()

Pop()

Pop()

Top →



LoadIdentity()

Push()

T()

R()

Push()

S()

R()

Teapot()

Pop()

Push()

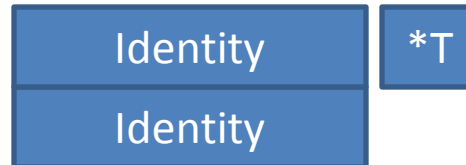
R()

Cube()

Pop()

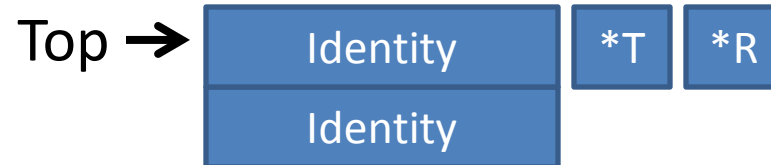
Pop()

Top →



LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

 Push()
 R()
 Cube()
 Pop()
Pop()



LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

Push()
 R()
 Cube()
 Pop()
Pop()



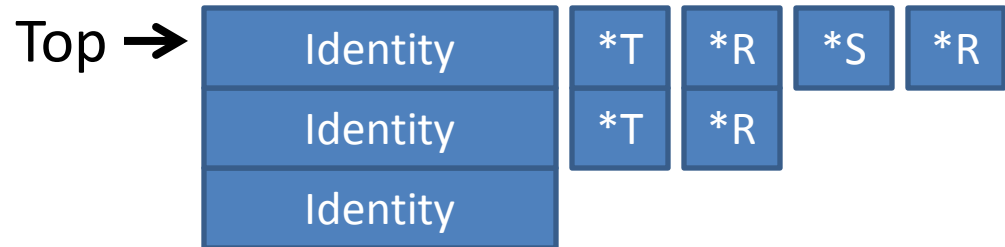
LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

Push()
 R()
 Cube()
 Pop()
Pop()



LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

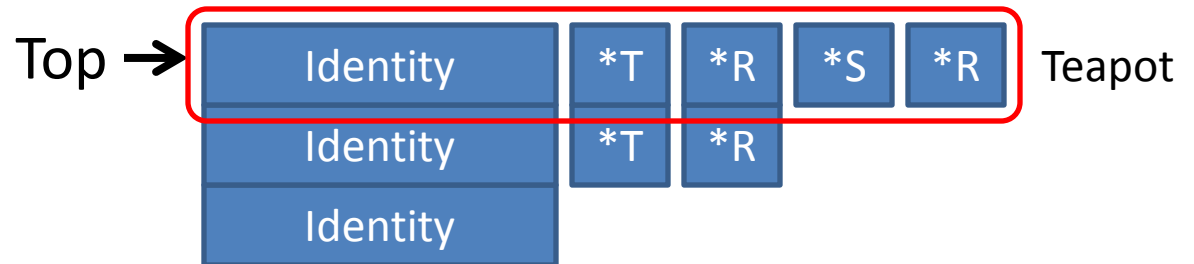
Push()
 R()
 Cube()
 Pop()
Pop()



```
LoadIdentity()  
Push()  
  T()  
  R()  
Push()  
  S()  
  R()  
  Teapot()  
Pop()
```

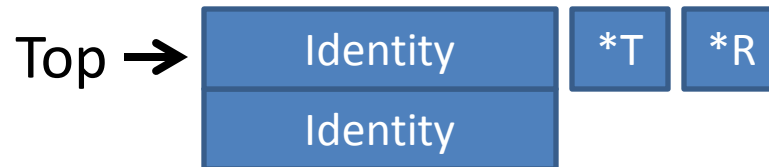
```
Push()  
  R()  
  Cube()  
Pop()  
Pop()
```

What you need to remember when rendering



LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
Pop()

Push()
 R()
 Cube()
Pop()
Pop()



LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

Push()
 R()
 Cube()
 Pop()
Pop()



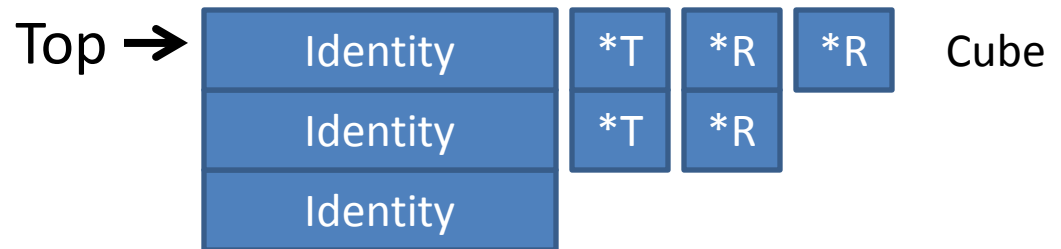
LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

Push()
 R()
 Cube()
 Pop()
Pop()



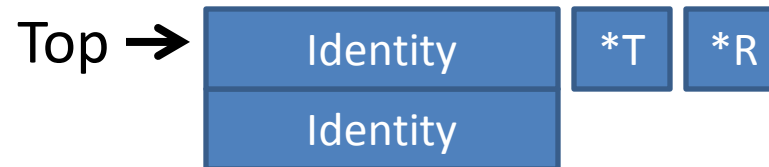
LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

Push()
 R()
 Cube()
 Pop()
Pop()



LoadIdentity()
Push()
 T()
 R()
 Push()
 S()
 R()
 Teapot()
 Pop()

 Push()
 R()
 Cube()
 Pop()
Pop()



LoadIdentity()

Push()

T()

R()

Push()

S()

R()

Teapot()

Pop()

Push()

R()

Cube()

Pop()

Pop()

Top →  Identity

```
LoadIdentity()
```

```
Push()
```

```
    T()
```

```
    R()
```

```
    Push()
```

```
        S()
```

```
        R()
```

```
        Teapot()
```

```
    Pop()
```

```
    Push()
```

```
        R()
```

```
        Cube()
```

```
    Pop()
```

```
Pop()
```

```
Display()
```

```
{
```

```
    // row-col-major issue
```

```
    m = Lookat() * whatever your transform();
```

```
    glLoadMatrix( pointer to m)
```

```
}
```