Spline object s2 is created and called.

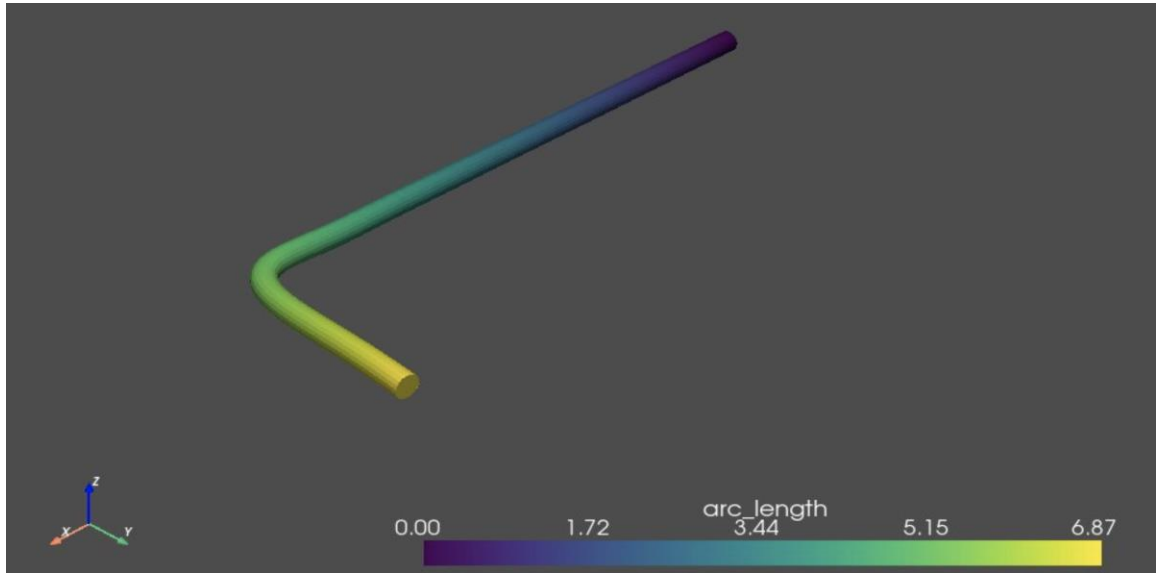
```
s1 =  Spline("spline_1", 0.51, [[0,0,-3], [0,0,-2], [0,0,-1] ,[0,0,0] ,[0,0,1], [0,0,2] ,[0,0,3]], "blue")
s2 = Spline("spline_2", 0.32, [[0,-3,0], [0,-2,0], [0,-1,0] ,[0,0,0] ,[0,1,0], [0,2,0] ,[0,3,0]], "green")
s2.introSpline()
```

```
spline name = spline_2, radius = 0.32 , spline coordinates = [[0, -3, 0], [0, -2, 0], [0, -1, 0], [0, 0, 0], [0, 1, 0], [0, 2, 0], [0, 3, 0]], color
= green
```

Result of calling introSpline on spline object s2

A straight spline with 13 coordinates between –3 and 3 is created on x axis. NinetyBend is called at point 2.23

```
s4 = Spline("spline_4", 0.101, np.linspace(-3,3, 13), "yellow")
s4.NinetyBend(2.23)
```



Spline curved by ninety degrees at 2.23 in [-3,3]

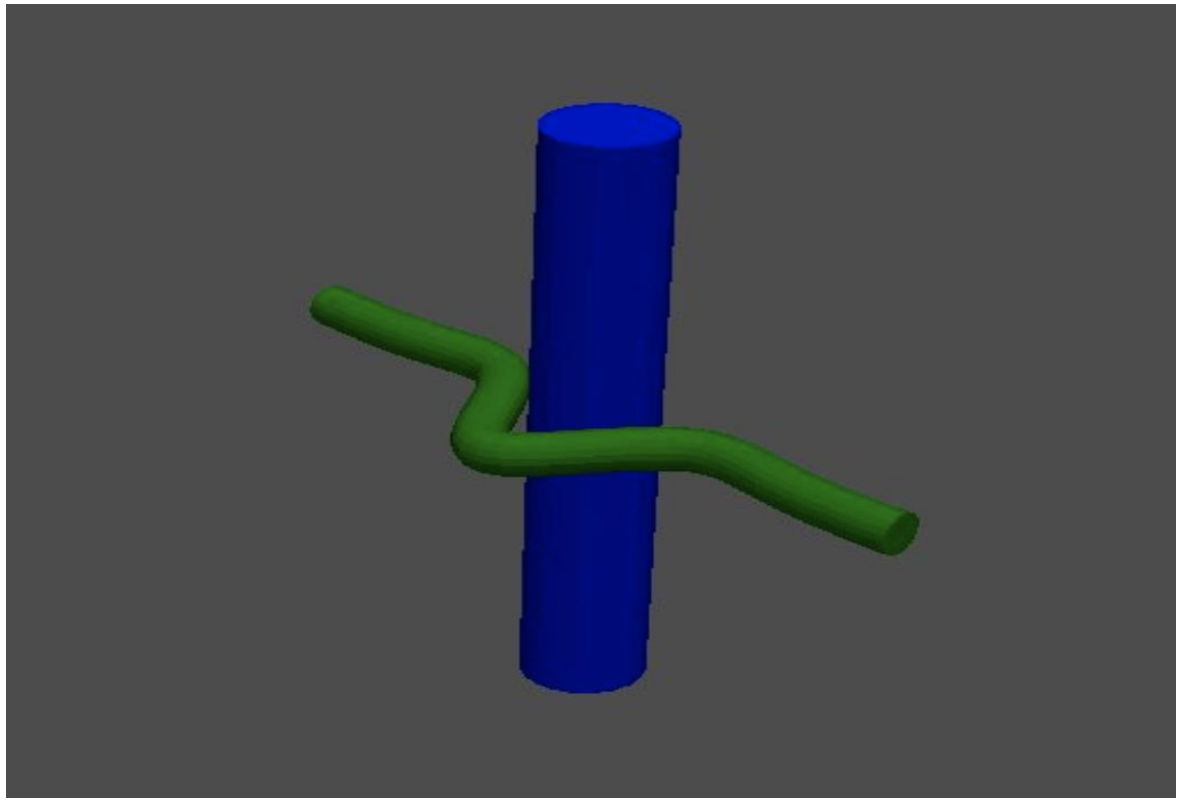
Two spline objects that intersect at [0,0,0]. avoidCollision is called on both.

```
s1 =  Spline("spline_1", 0.51, [[0,0,-3], [0,0,-2], [0,0,-1] ,[0,0,0] ,[0,0,1], [0,0,2] ,[0,0,3]], "blue")
s2 = Spline("spline_2", 0.21, [[0,-3,0], [0,-2,0], [0,-1,0] ,[0,0,0] ,[0,1,0], [0,2,0] ,[0,3,0]], "green")

avoidCollision(s1,s2)
```

```
no collision at [0, 0, -3]
no collision at [0, 0, -2]
no collision at [0, 0, -1]
collision at [0, 0, 0]
no collision at [0, 0, 1]
no collision at [0, 0, 2]
no collision at [0, 0, 3]
```

Code checks and compares every point for collision.



Collision averted

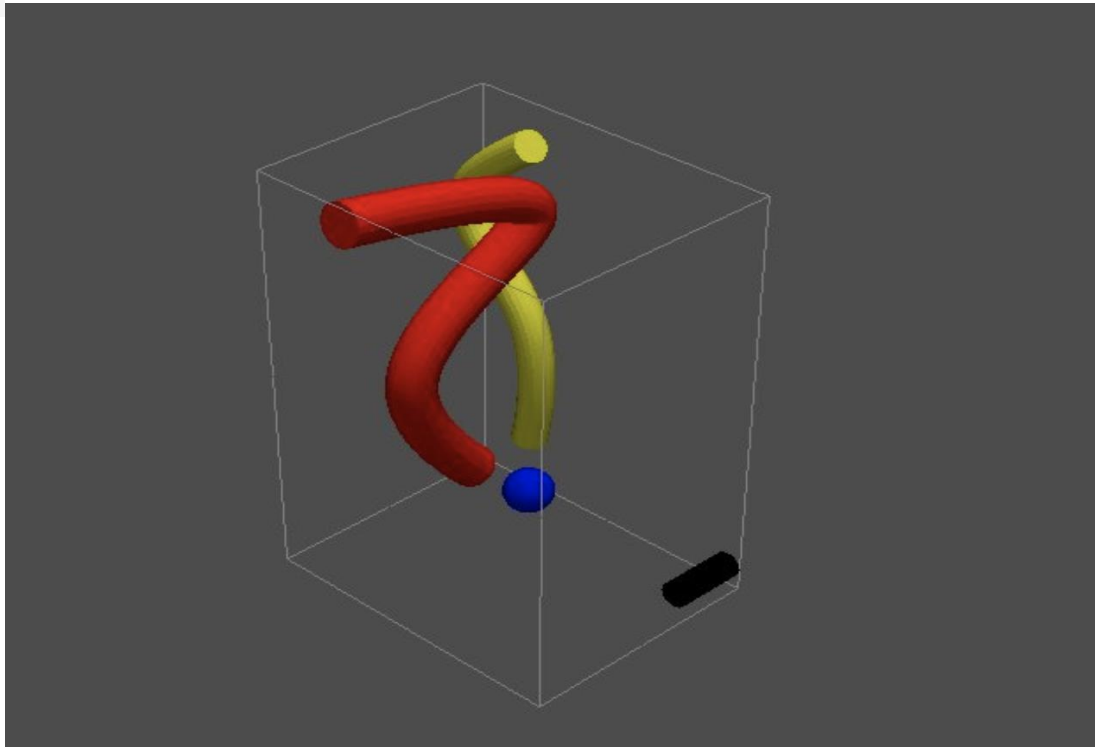
Spline and component objects created and stored in object arrays

```
s1 = Spline("spline_1", 0.32, [[1,0,1],[2,0,3],[0,0,5],[3,0,6]], "red")
print(s1.points)
s2 = Spline("spline_2", 0.24, [[0,0,1],[0,0,3],[0,-1,5],[0,0,6]], "yellow")
print(s2.points)

splines = [s1,s2]

comp1 = Component("sphere", (0,0,0), 0.35, "blue")
comp2 = Component("cylinder", (0,3,0), 0.20, "black")
components = [comp1, comp2]

scene(splines, components)
```



Scene