

Lab Tasks

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Activity 8:

Imagine two matrices given in the form of 2D lists as under;

In []:

```
a = [[1, 0, 0], [0, 1, 0], [0,
b = [[1, 2, 3], [4, 5, 6], [7,
c = []
```

```
for indrow in range(3):
    c.append([])
    for indcol in range(3):
        c[indrow].append(0)
        for indaux in range(3)
            c[indrow][indcol]

print(c)
```

```
[[1, 2, 3], [4, 5, 6], [7, 8,
9]]
```

Activity 9

In []:

```
import math

def polygon_perimeter(coords):
    # Find the number of vertices
    n = len(coords)
    # Initialize the perimeter
    perimeter = 0
    # Loop through all vertices
    for i in range(n):
        # Calculate the distance between vertices
        x1, y1 = coords[i]
        x2, y2 = coords[(i+1)%n]
        side_length = math.sqrt((x2-x1)**2 + (y2-y1)**2)
        # Add the length of the side to the perimeter
        perimeter += side_length
    return perimeter
```