

# CS2302 - Data Structures

Spring 2023

## Quiz - Arrays

Open Notes, you may request help from TA or instructor

1. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
print(a.shape)
print(len(a.shape))
```

2. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
for i in a:
    print(i)
```

3. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
for i in range(a):
    print(i)
```

4. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
for i in range(a.shape[0]):
    for j in range(a.shape[1]):
        print(a[i,j],end=' ')
    print()
```

5. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
print(a[:1,:2])
```

6. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
print(np.sum(a[1,:]))
```

7. What is the output of the following code fragment?

```
a = np.array([[2,4,6,8],[1,3,5,7]])
print(np.sum(a[:,1]))
```

8. What is the output of the following code fragment?

```
a = np.array([2,4,0,1,3,5])
n = 1
print(a[n])
print(a[a[n]])
print(a[a[a[n]])])
```