

List and 2-D Lists Worksheet
CS 141

Use the following 1-D list to answer the following questions.

L = [97, 54, 62, 12, 19, 49]

1. What is the len(L)?

2. What is output by the following code?

```
for i in range(0, len(L)-1):  
    L[i] = L[i+1]  
print(L)
```

3. What is output by the following code?

```
for pos in range(0, len(L)-1):  
    smallest_pos = pos  
    for test_pos in range(pos+1, len(L)):  
        if L[test_pos] < L[smallest_pos]:  
            smallest_pos = test_pos  
    temp = L[pos]  
    L[pos] = L[smallest_pos]  
    L[smallest_pos] = temp  
print(L)
```

Use the following 2-D List to answer the following questions.

```
matrix = [[1, 3, 7, 2, 6], [9, 4, 11, 8, 15], [6, 13, 5, 10, 12]]
```

1. What is output by the following code?

```
print(matrix[1][2])
```

2. What is output by the following code?

```
for x in range(len(matrix)):
    print(x, end=' ')
```

3. What is output by the following code?

```
for i in range(0, len(matrix)):
    print(matrix[i][2], end = " ")
```

4. What is output by the following code?

```
for r in range(0, len(matrix)):
    v = 0
    for c in range(0, len(matrix[r])):
        if v < matrix [r][c]:
            v = matrix [r][c]
    print(v)
```

5. What is output by the following code?

```
v = matrix [0][0]
r = 0
c = 0
for row in range(0, len(matrix)):
    for col in range(0, len(matrix[row])):
        if v < matrix [row][col]:
            v = matrix [row][col]
            r = row
            c = col
print(v, r, c)
```