

CS150 L05: String iteration - solution

```
1. def mystery(s):
    new_s = ""
    for c in s:
        new_s = c + new_s
    return new_s
```

What is a good description of this function?

- (A) Return a copy of `s`
- (B) Return the reverse of `s`
- (C) Return a string consisting of only the final character of `s`
- (D) Return a string consisting of only the first character of `s`
- (E) I don't know

Answer: B

Since we build up the new string `new_s` by prepending (adding new characters to the front), we reverse the string

2. What is the value of `val` after this code executes?

```
val = 0
for i in 'ab':
    for j in 'cd':
        val = val + 1
```

- (A) 1
- (B) 2
- (C) 4
- (D) 8
- (E) 16

Answer: C

There are 2 characters in each of 'ab' and 'cd', so each loop will have 2 iterations, and thus we will add "1" to val 4 times (since the loops are nested)

3. What is the value of val after this code executes?

```
val = 0
for i in 'abc':
    for j in 'def':
        val = val + 1
```

- A 1
- B 3
- C 6
- D 9
- E 27

Answer: D

There are 3 characters in each of 'abc' and 'def', so each loop will have 3 iterations, and thus we will add "1" to val 9 times (since the loops are nested)