CSCI 150 HW: for loop reading practice

Due: Wednesday, October 24

To receive full credit, for each exercise you should do the following:

1. **Predict**: First, complete the exercise *without* using the Python interpreter. *Trace the execution of the code, keeping track of the function stack, all variables, and any output produced.*
2. **Check**: Run the code. Does the actual output agree with what you wrote down in step 1?
3. **Evaluate**: If your answer to part 1 was different than the actual output, keep experimenting with it, consult the textbook or Python documentation, ask a friend or TA or professor, *etc.* until you can explain why the code works the way it does *and* what your misunderstanding(s) were in part 1.

You should consider the code in each exercise separately from the other exercises.

1. Trace the execution of the following code.

```
def aaa(lst: List[int]) -> List[int]:
    bbb: List[int] = []
    for i in range(len(lst)):
        bbb.append(lst[len(lst) - i - 1])

    return bbb

def main():
    mynums: List[int] = [4,6,2,9]
    print(aaa(mynums))
```

2. Trace the execution of the following code.

```
xs: List[int] = [0,1,2,3,4]
for i in range(len(xs)):
    xs[i] = 2*xs[i] + 1

s: int = 0
p: int = 1
for x in xs:
    s += x
    p *= x

print(s)
print(p)
```

3. Trace the execution of the following code.

```
def q(n: int) -> str:
    s: str = 'TIPNR'
    return s[n % 5]

def m():
    s: str = ''
    for count in range(1,6):
        s += q(2*count)
        i += 2
    print(s)

m()
```