NAME: _______________________

CS21-S22 Lab 5 written part. Due: beginning of class Fri, Feb. 25

Consider the following program:

```python
def main():
    print("in main")
    val = 23
    x = 5
    y = 17
    result = mystery(val, x, y)

    #scope Q2
    print("val: \%d \% (val))
    print("Result: \%d \% (result))

# mystery function:
def mystery(num, lb, ub):
    print("in mystery")

    #scope Q3
    if num < lb:
        num = num + lb
    if num >= ub:
        num = ub

    #stack Q1
    return num

main()
```

1. To the right of the program text, draw the stack as it appears when the program reaches the line #stack Q1.

2. For the line #scope Q2, which variables are currently in scope? That is, which variables can you refer to without getting a runtime error?

3. For the line #scope Q3, which variables are currently in scope?

4. What output is produced by the whole program?