

NAME: \_\_\_\_\_

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

Consider the following program:

```
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()
```

DRAW STACK HERE

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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?