

Problems:

1 (text) Stacking [10 points] Given an empty stack, what will be the contents of the stack after the following operations? (Hint: When you have a method inside another method call (e.g., this(that())), that() will be executed first, afterwards this() will be executed)

- push(8)
- push(2)
- pop()
- push(pop()*2)
- push(10)
- push(pop()/2)

| | | |
|---------------|-------|-----------|
| Push(8) | Stack | (8) |
| Push(2) | Stack | (8) (2) |
| Pop() | Stack | (8) |
| Push(pop()*2) | Stack | (16) |
| Push(10) | Stack | (16) (10) |
| Push(pop()/2) | Stack | (16) (5) |

2 (text) Queueing [10 points] Given an empty queue, what will be the contents of the stack after the following operations? (Hint: When you have a method inside another method call (e.g., this(that())), that() will be executed first, afterwards this() will be executed)

- push(4)
- push(pop()+4)
- push(8)
- push(pop()/2)
- pop()
- pop()

| | | |
|---------------|-------|---------|
| Push(4) | Queue | (4) |
| Push(pop()+4) | Queue | (8) |
| Push(8) | Queue | (8) (8) |
| Push(pop()/2) | Queue | (8) (4) |
| Pop() | Queue | (4) |
| Pop() | Queue | |