

Stack Frame 1

1. **Line 12 Print Set = (1 2 3) First**

2. Line 15 Set = (1 2 3) i = [1], j = [2], start = [0] (Top of inner for loop)

3. Line 18: Set = (1 3 2) i = [1], j = [2], start = [0] (Swap: Pre-Recursive Call (2))

Return From Stack Frame 2

4. Line 15: Set = (1 3 2) i = [1], j = [3], start = [0] (Top of inner for loop, end condition j > end)

5. Line 25: Set = (1 2 3) i = [1], j = [], start = [0] (Rotate left)

6. Line 15: Set = (1 2 3) i = [0], j = [1], start = [0] (Top of inner for loop)

7. Line 18: Set = (2 1 3) i = [0], j = [1], start = [0] (Swap: Pre-Recursive Call (3))

Return From Stack Frame 3

8. Line 15: Set = (2 1 3) i = [0], j = [2], start = [0] (Top of inner for loop)

9. Line 18: Set = (3 1 2) i = [0], j = [2], start = [0] (Swap: Pre-Recursive Call (5))

Return From Stack Frame 5

10. Line 25: Set = (1 2 3) i = [0], j = [], start = [0] (Rotate Left)

11. Line 14: Set = (1 2 3) i = [-1], j = [], start = [0] (Top of inner for loop, end condition i < start)

RETURN: Calling Program

Stack Frame 2

1. **Line 12 Print Set = (1 3 2) Second**

2. Line 14 Set = (1 3 2) i = [1], j = [2], start = [2] (Top of outer for loop, end condition i < start)

RETURN: Stack Frame 1

Stack Frame 3

1. **Line 12 Print Set = (2 1 3) Third**

2. Line 15 Set = (2 1 3) i = [1], j = [2], start = [1] (Top of inner for loop)

3. Line 18 Set = (2 3 1) i = [1], j = [2], start = [1] (Swap: Pre-Recursive Call (4))

Return From Stack Frame 4

4. Line 15: Set = (2 3 1) i = [1], j = [3], start = [1] (Top of inner for loop, end condition)

5. Line 25: Set = (2 1 3) i = [1], j = [], start = [1] (Rotate left)

6. Line 15: Set = (2 1 3) i = [0], j = [1], start = [1] (Top of outer for loop, end condition i < start)

RETURN: Stack Frame 1

Stack Frame 4

1. **Line 12 Print Set = (2 3 1) Fourth**

2. Line 15 Set = (2 3 1) i = [1], j = [2], start = [2] (Top of outer for loop, end condition i < start)

RETURN: Stack Frame 3

Stack Frame 5

1. **Line 12 Print Set = (3 1 2) Fifth**

2. Line 15 Set = (3 1 2) i = [1], j = [2], start = [1] (Top of inner for loop)

3. Line 17 Set = (3 2 1) i = [1], j = [2], start = [1] (Swap: Pre-Recursive Call (6))

4. Line 15 Set = (3 2 1) i = [1], j = [3], start = [1] (Top of inner for loop, end condition j > end)

5. Line 14 Set = (3 2 1) i = [0], j = [], start = [1] (Top of outer for loop, end condition i < start)

RETURN: Stack Frame 1

Stack Frame 6

1. **Line 12 Print Set = (3 1 2) Sixth**

2. Line 15 Set = (3 2 1) i = [1], j = [2], start = [2] (Top of outer for loop, end condition i < start)

RETURN: Stack Frame 5