Programming Fundamentals

Assignment No.4 - (Outputs)

Output No.1

```
Enter size of array = 5
Enter elements = 1 2 3 4 5
                                   ----Menu-----
                                  1. Grow from Front
                                  Grow from End
-----Menu-----
                                  3. Grow at Position
1. Grow from Front
2. Grow from End
                                  4. Shrink from Front
3. Grow at Position
                                  5. Shrink from End
4. Shrink from Front
                                  Shrink at Position
5. Shrink from End
                                  0. Exit
6. Shrink at Position
                                  Enter your choice = 3
0. Exit
Enter your choice = 1
                                  Enter value and position to insert = 3 4
Enter value to insert at front = 0
                                  Array = 0 1 2 3 3 4 5 6
Array = 0 1 2 3 4 5
                                  -----Menu-----
 ----Menu-----

    Grow from Front

1. Grow from Front
                                  2. Grow from End
2. Grow from End
3. Grow at Position
                                  Grow at Position
4. Shrink from Front
                                  4. Shrink from Front
5. Shrink from End
                                  5. Shrink from End
6. Shrink at Position
                                  Shrink at Position
0. Exit
                                  Exit
Enter your choice = 2
Enter value to insert at end = 6
                                  Enter your choice = 4
Array = 0 1 2 3 4 5 6
                                  Array = 1 2 3 3 4 5 6
```

```
-----Menu-----
1. Grow from Front
2. Grow from End
3. Grow at Position
4. Shrink from Front
                            ---Menu----
Shrink from End

    Grow from Front

6. Shrink at Position
0. Exit
                        2. Grow from End
Enter your choice = 5
Array = 1 2 3 3 4 5
                        Grow at Position
                         4. Shrink from Front
-----Menu-----
1. Grow from Front
                        Shrink from End
2. Grow from End
3. Grow at Position
                        Shrink at Position
4. Shrink from Front
                         Exit
Shrink from End
6. Shrink at Position
                        Enter your choice = 0
0. Exit
                        Exiting program
Enter your choice = 6
Enter position to remove = 3
                        Array = 1 2 3 4 5
Array = 1 2 3 4 5
```

File Outputs:

Output No.2

```
Enter number of rows and columns = 3 3
                                                ---Menu----
Row 0: 1 2 3
                                             1. Add row at front
Row 1: 4 5 6
                                             2. Add row at end
Row 2: 7 8 9
                                             3. Add row at position
                                             4. Remove row from front
-----Menu-----
                                                Remove row from end
                                             6. Remove row at position

    Add row at front

                                             0. Exit
2. Add row at end
                                             Enter choice = 4
Add row at position
Remove row from front
                                             Current Array =
Remove row from end
                                             1 2 3
                                             4 5 6
Remove row at position
                                             7 8 9
Exit
                                             10 11 12
Enter choice = 1
Enter 3 values = 0 0 0
                                              ----Menu-----
                                             1. Add row at front
Current Array =
                                             2. Add row at end
                                             3. Add row at position
000
                                             Remove row from front
1 2 3
                                             5. Remove row from end
4 5 6
                                             6. Remove row at position
7 8 9
                                             0. Exit
                                             Enter choice = 5
-----Menu-----
                                             Current Array =
1. Add row at front
                                             1 2 3
2. Add row at end
                                             4 5 6
Add row at position
                                             7 8 9
4. Remove row from front
5. Remove row from end
                                              -----Menu----
                                             1. Add row at front
6. Remove row at position
                                             Add row at end
Exit
                                             3. Add row at position
Enter choice = 2
                                             4. Remove row from front
Enter 3 values = 10 11 12
                                             5. Remove row from end
                                             6. Remove row at position
Current Array =
                                             0. Exit
0 0 0
                                             Enter choice = 6
1 2 3
                                             Enter position = 1
4 5 6
                                             Current Array =
 8 9
                                             1 2 3
10 11 12
                                             7 8 9
```

File Outputs:

```
original_array - Notepad

File Edit Format View Help

1 2 3
4 5 6
7 8 9

updated_array - Notepad

File Edit Format View Help

1 2 3
7 8 9
```

Output No.3

```
-Menu---
                                                  1. Add row at front
Enter number of rows = 3
                                                                                                  Add row at front
                                                    Add row at end
For row 0
                                                                                               2. Add row at end
                                                  3. Add row at position
Enter number of columns for the row = 2
                                                    Remove row from front
                                                                                               Add row at position
Enter 2 values = 1 2
                                                    Remove row from end
                                                                                               4. Remove row from front
For row 1
                                                    Remove row at position
                                                                                               5. Remove row from end
Enter number of columns for the row = 3
                                                  0. Exit
                                                                                                  Remove row at position
                                                  Enter choice = 2
Enter 3 values = 1 \ 2 \ 3
                                                                                               0. Exit
                                                  Enter number of columns for the row = 5
For row 2
                                                  Enter 5 values = 1 2 3 4 5
                                                                                               Enter choice = 4
Enter number of columns for the row = 4
Enter 4 values = 1 2 3 4
                                                  Current Jagged Array =
                                                  Row 0 = 1

Row 1 = 1 2

Row 2 = 1 2 3

Row 3 = 1 2 3 4

Row 4 = 1 2 3 4 5
                                                                                               Current Jagged Array =
                                                                                               Row 0 = 1 2
Current Jagged Array =
Row 0 = 1 2
                                                                                               Row 1 = 1 2 3
Row 1 = 1 2 3
                                                                                               Row 2 = 1 \ 2 \ 3
Row 2 = 1 2 3 4
                                                                                               Row 3 = 1 2 3 4
                                                                                               Row 4 = 1 2 3 4 5
                                                   -----Menu-----
 -----Menu-----
                                                  1. Add row at front

    Add row at front

                                                                                                -----Menu-----
                                                  2. Add row at end
2. Add row at end
                                                  3. Add row at position
                                                                                               1. Add row at front
3. Add row at position
                                                  4. Remove row from front
                                                                                               2. Add row at end
                                                  5. Remove row from end
4. Remove row from front
                                                                                              3. Add row at position
                                                  6. Remove row at position
 . Remove row from end
                                                                                               4. Remove row from front
                                                  0. Exit
6. Remove row at position
                                                                                               5. Remove row from end
                                                  Enter choice = 3
0. Exit
                                                  Enter position = 3
                                                                                               6. Remove row at position
Enter choice = 1
                                                  Enter number of columns for the row = 3 Enter 3 values = 1 \ 2 \ 3
                                                                                               0. Exit
Enter number of columns for the row = 1
                                                                                               Enter choice = 5
Enter 1 values = 1
                                                  Current Jagged Array =
                                                                                               Current Jagged Array =
                                                  Row 0 = 1
Row 1 = 1 2
Current Jagged Array =
                                                                                               Row 0 = 1 2
Row 0 = 1
                                                  Row 1 = 1 2
Row 2 = 1 2 3
Row 3 = 1 2 3
Row 4 = 1 2 3 4
Row 5 = 1 2 3 4 5
                                                                                               Row 1 = 1 2 3
Row 1 = 1 2
Row 2 = 1 2 3
                                                                                               Row 2 = 1 \ 2 \ 3
Row 3 = 1 2 3 4
                                                                                               Row 3 = 1 2 3 4
```

```
-----Menu-----
1. Add row at front
2. Add row at end
3. Add row at position
4. Remove row from front
5. Remove row from end
6. Remove row at position
Exit
Enter choice = 6
Enter position = 1
Current Jagged Array =
Row 0 = 1 2
Row 1 = 1 \ 2 \ 3
Row 2 = 1 \ 2 \ 3 \ 4
-----Menu-----
1. Add row at front
2. Add row at end
3. Add row at position
4. Remove row from front
5. Remove row from end
6. Remove row at position
0. Exit
Enter choice = 0
Exiting the program
Current Jagged Array =
Row 0 = 1 2
Row 1 = 1 \ 2 \ 3
Row 2 = 1 \ 2 \ 3 \ 4
```

File Outputs:

