

Practice 18 – nested while loop

Tasks: Write codes to generate following outputs, For practice of for loop, create all programs again using for loop, previously created using while loop.

a. Sample Run:

```
N: 5
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

b. Sample Run:

```
Rows: 5
+
++
+++
++++
+++++
+++++
+++++
++++
+++
++
+
```

c. Sample Run:

```
N: 5
+++++
++++
+++
++
+
++
+++
++++
+++++
```

d. Sample Run:

```
N: 5
+++++++
++++  ++++
+++   +++
++    ++
+     *
++    ++
+++   +++
++++  ++++
+++++++
```

e. Sample Run:

N: 5

a b c d e f

a c e g i k

a d g j m p

a e i m q u

f. Sample Runs:

Rows: 8

Columns: 3

1 2 3

2 3 4

3 4 5

4 5 6

5 6 7

6 7 8

7 8 9

8 9 10

Rows: 3

Columns: 5

1 2 3 4 5

2 3 4 5 6

3 4 5 6 7

g. Sample Run:

Rows:5

Columns:6

1

2

3

4

5

h. Sample Run:

Rows:5

1

2

3

4

5

i. Sample Run: (Run inner loop for spaces reverse of outer loop)

Rows:5

1

2

3

4

5

j. Sample Run:

Rows:5

Columns:6

1 1 1 1 1

2 2 2 2 2

3 3 3 3 3

4 4 4 4 4

5 5 5 5 5

k. Sample Run: (Use two inner loops in one outer loop)

Rows:3

Columns:4

1 1 1 1

a a a a

2 2 2 2

b b b b

3 3 3 3

c c c c

l. Sample Run:

Rows:3

Columns:4

1 2 3 4

a b c d

2 3 4 5

b c d e

3 4 5 6

c d e f