About Lab 2

Lab 2 calls for you to write 10 programs!

- One prints the old "99 bottles of beer on the wall" song.

A typical verse is

90 bottles of beer on the wall
90 bottles of beer!
Take one down, pass it around
89 bottles of beer on the wall.

- One program asks the user to enter a number n, and then prints the perfect squares from n^2 to 1, separated by commas.
  For example, if n is 4 it prints 16, 9, 4, 1
  The commas are the tricky part.
- One asks for the number n and then prints the nth Fibonacci number.
- One asks the user for an initial bank balance, the interest rate, a monthly deposit amount, and a number of months; the program prints the value of the account after each month.

Finally, the lab has 6 patterns that you are asked to code. Each pattern asks the user for a size. For example, Pattern C has this for size 3:

```
1 2 3
2 3
3
```

and this for size 4:

```
1 2 3 4
2 3 4
3 4
4
```

1 2 3 4
2 3 4
3 4
4

For the size n figure, number the rows from 1 to n.
How would you describe row i?

A) Row i has the numbers from 1 to n

B) Row i has the numbers from 1 to i

C) Row i has the numbers from i to n

D) Row i has the numbers from i to 1

Here is the code for pattern C:

```
n = eval(input( "Size? "))
for i in range(1, n+1):
        # print row number i
        for j in range(i, n+1):
                print( j, end = " " )
        print()
```

Pattern B with size 4 is

1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4

How would you describe row i for this pattern with size n?

A) Row i has the numbers from 1 to n
B) Row i has the number i n times
C) Row i has the number n i times
D) Row i has the number n n times