

Lab 3 100 points

100 points

1. Write a function **isBetween**(x, y, z) that returns **True** if $y \leq x \leq z$ or **False** otherwise. (15 points)
2. Write a function that takes a string as an argument and outputs the letters backward, one per line. (15 points)
3. In Robert McCloskey’s book Make Way for Ducklings, the names of the ducklings are Jack, Kack, Lack, Mack, Nack, Ouack, Pack, and Quack. The following scripts could output these names in order, but the results are not correct. Modify the program to fix the error that instead of “Oack” and “Qack” to output the correct names “Ouack” and “Quack”. (15 points)

```
prefixes = "JKLMNOPQ"
suffix = "ack"

for letter in prefixes:
    print letter + suffix
```

4. Create a function named **countLetters** that accepts a string and a letter as arguments and returns the number of times the letter appears in the string. It should return -1 if the letter is not in the string. (15 points)
5. Ask the user to enter five numbers, each between 1 and 30. For each number read, draw a line containing that number of adjacent asterisks. (20 points)
6. Print all the prime numbers from 1 to 100. (Note: Prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself.) (20 points)

Bonus: Display the pattern below using loops. (10 points)

```

      *
     **
    ***
   ****
  *****
 *****
*****
 *****
  *****
   ****
    ***
     **
      *

```

Deliverable:

- **Your Python script (100 points)**