Python Basic Programming Assignment 16

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1. Write a function that stutters a word as if someone is struggling to read it. The first two letters are repeated twice with an ellipsis ... and space after each, and then the word is pronounced with a question mark ?. Examples
stutter('incredible') → 'in... in... incredible?'
stutter('enthusiastic') → 'en... en... enthusiastic?'
stutter('outstanding') → 'ou... ou... outstanding?'

Hint :- Assume all input is in lower case and at least two characters long.

```python
In [2]:  def stutter(word):
             return (word[0]+word[1]+"... "+word[0]+word[1]+"... "+word)
         a=input("Enter any word: ")
         print(stutter(a))
```

```
in... in... incredible
```

2. Create a function that takes an angle in radians and returns the corresponding angle in degrees rounded to one decimal place.

```python
In [9]:  def r2d(n):
             return (n*360*7/22)
         n=float(input("Enter any angle in radians: "))
         print("Equivalent angle in degree is: {}".format(round(r2d(n),2)))
```

```
Equivalent angle in degree is: 114.55
```

3. In this challenge, establish if a given integer num is a Curzon number. If 1 plus 2 elevated to num is exactly divisible by 1 plus 2 multiplied by num, then num is a Curzon number. Given a non-negative integer num, implement a function that returns True if num is a Curzon number, or False otherwise.

```python
In [22]:  import math
          def cur(n):
              if((1+pow(2,n))%(1+2*n)==0):
                  return True
              else:
                  return False

          n=int(input("Enter any number: "))
          print(cur(n))
```

```
False
```

4. Given the side length x find the area of a hexagon.

In [19]:
```python
import math
def hexagonArea(s):
    return ((3 * math.sqrt(3) *
            (s * s)) / 2);
if __name__ == "__main__" :
    s = float(input("Enter side length of hexagon: "))
    print("Area:","{0:.2f}".format(hexagonArea(s)))
```

Area: 374.12

5. Create a function that returns a base-2 (binary) representation of a base-10 (decimal) string number. To convert is simple: ((2) means base-2 and (10) means base-10) 010101001(2) = 1 + 8 + 32 + 128.

In [14]:
```python
def binaryToDecimal(n):
    num = n;
    dec_value = 0;
    base = 1;
    temp = num;
    while(temp):
        last_digit = temp % 10;
        temp = int(temp / 10);
        dec_value += last_digit * base;
        base = base * 2;
    return dec_value;

# Driver Code
num = int(input("Enter any binary number: "))
print(binaryToDecimal(num));
```

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