Write a Python function which takes a character (i.e. a string of length 1) and returns True if it is a vowel, False otherwise ¶

In [1]:
```
def vowel():
    b=input("Please enter a character\t")
    a=['a','e','i','o','u','A','E','I','O','U']
    if b in a:
        return True
    else:
        return False
vowel()
```

```
Please enter a character	u
```

Out[1]:
```
True
```

Write a Python program using function concept that maps list of words into a list of integers representing the lengths of the corresponding words.

In [2]:
```
def map_to_lengths_for(words):
    lengths=[]
    for i in range(len(words)):
        lengths.append(len(words[i]))
    return lengths

map_to_lengths_for(['ab','cde','elephant'])
```

Out[2]:
```
[2, 3, 8]
```

Write a function filter_long_words() that takes a list of words and an integer n and returns the list of words that are longer than n.

In [3]:
```
def filter_long_words(words,integer):
    lengths=[]
    for i in range(len(words)):
        if len(words[i])>integer:
            lengths.append(words[i])
    return lengths
filter_long_words(['ab','cde','elephant','hello'],2)
```

Out[3]:
```
['cde', 'elephant', 'hello']
```

Write a Python Program(with class concepts) to find the area of the triangle using the formula area = (s*(s-a)*(s-b)*(s-c)) * 0.5

In [5]:
```
class Area_of_Triangle:

    def __init__(self,a,b,c):
        self.a = float(a)
        self.b = float(b)
        self.c = float(c)

    def area(self):
        s=(self.a + self.b + self.c)/2
        return((s*(s-self.a)*(s-self.b)*(s-self.c))**0.5)

a=input("Enter the value of Side a = ")
b=input("Enter the value of Side b = ")
c=input("Enter the value of Side c = ")
t = Area_of_Triangle(a, b, c)
print("Area of Triangle abc is {}".format(t.area()))
```

```
Enter the value of Side a = 4.3
Enter the value of Side b = 2
Enter the value of Side c = 5.6
Area of Triangle abc is 3.6841136993855086
```

In [ ]:
```

```