Taller 4

Métodos Computacionales para Políticas Públicas - URosario

Entrega: viernes 31-ago-2018 11:59 PM

Juan Camilo Perdomo

juan.perdomor@urosario.edu.co

Instrucciones:

- Guarde una copia de este *Jupyter Notebook* en su computador, idealmente en una carpeta destinada al material del curso.
- Modifique el nombre del archivo del *notebook*, agregando al final un guión inferior y su nombre y apellido, separados estos últimos por otro guión inferior. Por ejemplo, mi *notebook* se llamaría: mcpp_taller4_santiago_matallana
- Marque el *notebook* con su nombre y e-mail en el bloque verde arriba. Reemplace el texto "[Su nombre acá]" con su nombre y apellido. Similar para su e-mail.
- Desarrolle la totalidad del taller sobre este *notebook*, insertando las celdas que sea necesario debajo de cada pregunta. Haga buen uso de las celdas para código y de las celdas tipo *markdown* según el caso.
- Recuerde salvar periódicamente sus avances.
- Cuando termine el taller:
  1. Descárguelo en PDF.
  2. Suba los dos archivos (.pdf y .ipynb) a su repositorio en GitHub antes de la fecha y hora límites.

(Todos los ejercicios tienen el mismo valor.)

Zelle, Exercises 6.8 (p. 159):

- True/False: 1-10
- Multiple choice: 2, 3, 6, 7, 10
- Programming Exercises: 1, 3, 4, 11, 12, 13

True / False questions:

Rpta 1) False

Rpta 2) False

Rpta 3) True

Rpta 4) True

Rpta 5) False

Rpta 6) False

Rpta 7) False

Rpta 8) True

Rpta 8) True

Rpta 9) True

Rpta 10) False

Multiple choice questions

Rpta 2) a: def

Rpta 3) a: return

Rpta 6) a: by value

Rpta 7) d: to demonstrate intellectual superiority

Rpta 10) a: mutable

Programming excercises

Ejercicio 1

In [28]:

```
def frase1():
    print("Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!")
def frase2(animal):
    print("And on that farm he had a", animal, "Ee-igh, Ee-igh, Oh!")
def frase3():
    print("With a moo, moo here and a moo, moo there.")
def frase4():
    print("Here a moo, there a moo, everywhere a moo, moo.")
```

In [29]:

```
frase1()
frase2("cow")
frase3()
frase4()

print()
frase1()
frase2("cat")
frase3()
frase4()

print()
frase1()
frase2("dog")
frase3()
frase4()

print()
frase1()
frase2("elephant")
frase3()
frase4()

print()
frase1()
frase2("lyon")
frase3()
frase4()
```

```
Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a cow Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a cat Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a dog Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a elephant Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a lyon Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.
```

```
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a cat Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a dog Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a elephant Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.

Old MacDonald had a farm, Ee-igh, Ee-igh, Oh!
And on that farm he had a lyon Ee-igh, Ee-igh, Oh!
With a moo, moo here and a moo, moo there.
Here a moo, there a moo, everywhere a moo, moo.
```

Ejercicio 3

In [ ]:

```
    def radio(self, radio):
        radio1 = r
        area1 = 0
        volumen1 = 0

    def radio(self):
        return radio1

    def Area(self):
        area1 = 4 * 3.14 * (r*r)
        return (area1)

    def Volumen(self):
        volumen1 = (4/3) * 3.14 * (r * r * r)
        return (volumen1)


def main():
    r = input("Ingresar radio de la esfera: ")
    s = esfera(r)
    print("El área es: ", s.Area())
    print("El volúmen es: ", s.Volume())

if __name__ == '__main__':
    main()
```

Ejercicio 4

In [23]:

```
def leern():
    n1 = 0
    n = int(input('Inserte cuántos números desea sumar, {n1}'))
    return n
def sumN(n):
    suma = 0
    for i in range(n):
        suma += i
    return suma
def sumNCubo(n):
    cubo = 0
    cubo = n**3
    return cubo

sumNCubo(sumN(leern()))
print(sumNCubo(sumN(leern())))
```

```
Inserte cuántos números desea sumar, {n1}5
Inserte cuántos números desea sumar, {n1}5
1000
```

Ejercicio 11

In [70]:

```
def squareEach(nums):
    for x in nums:
        x = x ** 2
        return x
def square():
    nums = [1, 5]
    print(squareEach(nums))
```

In [71]:

```
square()
```

```
1
```

Ejercicio 12

In [86]:

```
def sumList(nums):
    Suma = 0
    for i in nums:
        Sum = Sum + i
    return Sum
```

In [87]:

```
print(listsum([2,4,6,8,10]))
```

```
30
```