Assignment -3
Python Programming

Assignment Date	08 October 2022
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Student Roll Number	AC19UCS108
Maximum Marks	2 Marks

Exercises

Answer the questions or complete the tasks outlined in bold below, use the specific method described if applicable.

** What is 7 to the power of 4?**

```
print(pow(7,4))
```

```
2401
```

** Split this string:**

```
s = "Hi there Sam!"
```

*into a list. *
** Given this nested list, use indexing to grab the word "hello" **

```
s = "Hi there Sam!"
w=s.split()


print(w)
```

```
['Hi', 'there', 'Sam!']
```

** Given the variables:**

```
planet = "Earth"
diameter = 12742
```

** Use .format() to print the following string: **

```
The diameter of Earth is 12742 kilometers.
```

```
planet = "Earth"
diameter = 12742


print('The diameter of {} is {} kilometers'.format(planet,diameter))
```

```
The diameter of Earth is 12742 kilometers
```

```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]


print(lst[3][1][2][0])
```

```
hello
```

** Given this nest dictionary grab the word "hello". Be prepared, this will be annoying/tricky **

```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}


print(d['k1'][3]['tricky'][3]['target'][3])
```

```
hello
```

** What is the main difference between a tuple and a list? **

```
tuple=(1,2,3)
list=[1,2,3]
```

** Create a function that grabs the email website domain from a string in the form: **

```
 user@domain.com
```

So for example, passing "user@domain.com" would return: domain.com

```
email="user@domain.com"
```

```
email.split('@')[-1]
```

```
     'domain.com'
```

** Create a basic function that returns True if the word 'dog' is contained in the input string. Don't worry about edge cases like a punctuation being attached to the word dog, but do account for capitalization. **

```
x="this dog is so notey"
```

```
if 'dog'in x:
  print(" ")
```

** Create a function that counts the number of times the word "dog" occurs in a string. Again ignore edge cases. **

```
x="dog"
str="the dog is notey,when left along"
```

```
count=str.count(x)
```

Problem

**You are driving a little too fast, and a police officer stops you. Write a function to return one of 3 possible results: "No ticket", "Small ticket", or "Big Ticket". If your speed is 60 or less, the result is "No Ticket". If speed is between 61 and 80 inclusive, the result is "Small Ticket". If speed is 81 or more, the result is "Big Ticket". Unless it is your birthday (encoded as a boolean value in the parameters of the function) -- on your birthday, your speed can be 5 higher in all cases. **

```
def caught_speeding(speed, is_birthday):

    if is_birthday:
        speeding = speed - 5
    else:
        speeding = speed

    if speeding > 80:
        return 'Big Ticket'
    elif speeding > 60:
        return 'Small Ticket'
    else:
        return 'No Ticket'


caught_speeding(82,False)
```

```
'Big Ticket'
```

```
caught_speeding(69,True)
```

```
'Small Ticket'
```

Create an employee list with basic salary values(at least 5 values for 5 employees) and using a for loop retreive each employee salary and calculate total salary expenditure.

```
print("SALARY EXPENDITURE")
name=str(input("Enter Name of the Employee:"))
```

```
basic=float(input("Enter your Salary:"))
da=float(basic*0.25)
pf=float(basic+da*0.12)
hr=float(basic*0.15)
ta=float(basic*0.09)
netpay=float(basic+da+hr+ta)
grosspay=float(netpay-pf)
print("\n\n")
print("S A L A R Y D E T A I L E D B R E A K U P")
print("=====================================================")
print("Name of the employee:",name)
print("Basic Salary:",basic)
print("Dearness Allow",da)
print("Hosue Rent",hr)
print("Travel Allowance:",ta)
print("=====================================================")
print("Net pay:",netpay)
print("Provident Fund",pf)
print("=====================================================")
print("Gross Payment:",grosspay)
```

```
SALARY EXPENDITURE
Enter Name of the Employee:shreyas
Enter your Salary:60000
```

```
S A L A R Y D E T A I L E D B R E A K U P
==================================================
Name of the employee: shreyas
Basic Salary: 60000.0
Dearness Allow 15000.0
Hosue Rent 9000.0
Travel Allowance: 5400.0
==================================================
Net pay: 89400.0
Provident Fund 61800.0
==================================================
Gross Payment: 27600.0
```

Create two dictionaries in Python:

First one to contain fields as Empid, Empname, Basicpay

Second dictionary to contain fields as DeptName, DeptId.

Combine both dictionaries.

```
def Merge(dict1,dict2):
  return(dict2.update(dict1))


dict1={'A:8':10}
dict2={'C':9,'D':4}
print(Merge (dict1,dict2))
```

```
print(dict2)
```

```
None
{'C': 9, 'D': 4, 'A:8': 10}
```

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