

## MODULE – 3 ASSIGNMENT

### Conditional Statements

Please write Python Programs for all the problems .

1. Take a variable 'age' which is of positive value and check the following:
  - a. If age is less than 10, print "Children".
  - b. If age is more than 60 , print 'senior citizens'
  - c. If it is in between 10 and 60, print 'normal citizen'

```
1  # -*- coding: utf-8 -*-
2  """
3  Created on Wed Jul 17 14:00:46 2024
4
5  @author: saikumar
6  """
7
8  age = int(input("number: "))
9
10 if age <= 10:
11     print('children')
12 elif age >= 60:
13     print('senior citizens')
14 else:
15     print('normal citizen')
16
```

age    int    1    20

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In [1]: age = int(input("number: "))

```
...:
...: if age <= 10:
...:     print('children')
...: elif age >= 60:
...:     print('senior citizens')
...: else:
...:     print('normal citizen')
number: 10
children
```

In [2]: age = int(input("number: "))

```
...:
...: if age <= 10:
...:     print('children')
...: elif age >= 60:
...:     print('senior citizens')
...: else:
...:     print('normal citizen')
number: 20
normal citizen
```

In [3]: |

2. Find the final train ticket price with the following conditions.
  - a. If male and sr.citizen, 70% of fare is applicable
  - b. If female and sr.citizen, 50% of fare is applicable.
  - c. If female and normal citizen, 70% of fare is applicable
  - d. If male and normal citizen, 100% of fare is applicable

[Hint: First check for the gender, then calculate the fare based on age factor.. For both Male and Female ,consider them as sr.citizens if their age >=60]

```
1  #-*- coding: utf-8 -*-
2  """
3  Created on Wed Jul 17 14:08:44 2024
4
5  @author: saikumar
6  """
7
8  base_fare = 1000
9  age = int(input("enter your age:"))
10 gender = input("enter your gender(male/female):")
11
12 if age >= 60:
13     age_status = "sr.citizen"
14 else:
15     age_status = "normal citizen"
16
17 if gender == "male" and age_status == "sr.citizen":
18     final_price = 0.7 * base_fare
19 elif gender == "female" and age_status == "sr.citizen":
20     final_price = 0.6 * base_fare
21 elif gender == "female" and age_status == "normal citizen":
22     final_price = 0.7 * base_fare
23 elif gender == "male" and age_status == "normal citizen":
24     final_price = 0.10 * base_fare
25 else:
26     final_price = base_fare
27
28 print("final ticket price", final_price)
29
```

| Variable    | Type  | Value      |
|-------------|-------|------------|
| age         | int   | 75         |
| age_status  | str   | sr.citizen |
| base_fare   | int   | 1000       |
| final_price | float | 700.0      |
| gender      | str   | male       |

Help Variable Explorer Plots Files

Console 6/A X

Python 3.12.4 | packaged by Anaconda, Inc. | (main, Jun 18 2024, 15:03:56) [MSC  
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In [1]: runfile('C:/Users/saikumar/untitled4.py', wdir='C:/Users/saikumar')  
enter your age:40  
enter your gender(male/female):female  
final ticket price 700.0

In [2]: runfile('C:/Users/saikumar/untitled4.py', wdir='C:/Users/saikumar')  
enter your age:75  
enter your gender(male/female):male  
final ticket price 700.0

In [3]:

IPython Console History

3. Check whether the given number is positive and divisible by 5 or not.

```
1 # -*- coding: utf-8 -*-
2 """
3 Created on Wed Jul 17 14:36:43 2024
4
5 @author: saikumar
6 """
7
8 number = int(input("enter your number: "))
9
10 if number >= 0 and number % 5 == 0:
11     print("the number is positive and successfully divisible by 5")
12 else:
13     print("the number is negative do not successfully divisible by 5")
```

number int 1 33

Help Variable Explorer Plots Files

Console 8/A X

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In [1]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')  
enter your number: 55  
the number is positive and successfully divisible by 5

In [2]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')  
enter your number: 33  
the number is negative do not successfully divisible by 5

In [3]:

## Conditional Statements

Please implement Python coding for all the problems.

1. A) list1=[1,5.5,(10+20j), 'data science'].. Print default functions and parameters exist in list1.

```
1 list1 = [1,5.5,(10+20j),'data science']
2 print(dir(list1))
3
4
```

Console 9/A X

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[MSC v.1929 64 bit (AMD64)]  
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In [1]: list1 = [1,5.5,(10+20j),'data science']

In [2]: print(dir(list1))

['\_add\_', '\_\_class\_\_', '\_\_class\_getitem\_\_', '\_\_contains\_\_', '\_\_delattr\_\_', '\_\_delitem\_\_', '\_\_dir\_\_', '\_\_doc\_\_', '\_\_eq\_\_', '\_\_format\_\_', '\_\_ge\_\_', '\_\_getattr\_\_', '\_\_getitem\_\_', '\_\_getstate\_\_', '\_\_gt\_\_', '\_\_hash\_\_', '\_\_iadd\_\_', '\_\_imul\_\_', '\_\_init\_\_', '\_\_init\_subclass\_\_', '\_\_iter\_\_', '\_\_le\_\_', '\_\_len\_\_', '\_\_lt\_\_', '\_\_mul\_\_', '\_\_ne\_\_', '\_\_new\_\_', '\_\_reduce\_\_', '\_\_reduce\_ex\_\_', '\_\_repr\_\_', '\_\_reversed\_\_', '\_\_rmul\_\_', '\_\_setattr\_\_', '\_\_setitem\_\_', '\_\_sizeof\_\_', '\_\_str\_\_', '\_\_subclasshook\_\_', 'append', 'clear', 'copy', 'count', 'extend', 'index', 'insert', 'pop', 'remove', 'reverse', 'sort']

B) How do we create a sequence of numbers in Python?

```
1 seq = range(5)
2 print(list(seq))
3
4
```

Console 10/A X

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[MSC v.1929 64 bit (AMD64)]  
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IPython 8.25.0 -- An enhanced Interactive Python.

In [1]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')

[0, 1, 2, 3, 4]

C) Read the input from keyboard and print a sequence of numbers up to that number

```
1 number = int(input("enter your number: "))
2
3 seq = range(number)
4 print(list(seq))
5
6
```

Console 12/A X

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[MSC v.1929 64 bit (AMD64)]  
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In [1]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')  
enter your number: 20  
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19]

2. Create 2 lists.. one list contains 10 numbers (list1=[0,1,2,3....9]) and other list contains words of those 10 numbers (list2=['zero','one','two',.....,'nine']). Create a dictionary such that list2 are keys and list 1 are values..

```
1 list1 = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
2 list2 = ['zero', 'one', 'two', 'three', 'four', 'five',
3         'six', 'seven', 'eight', 'nine']
4
5 dictionary = dict(zip(list2, list1))
6 print(dictionary)
7
```

Console 13/A X

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[MSC v.1929 64 bit (AMD64)]  
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In [1]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')  
{'zero': 0, 'one': 1, 'two': 2, 'three': 3, 'four': 4, 'five': 5, 'six': 6, 'seven': 7, 'eight': 8, 'nine': 9}

3. Consider a list1 [3,4,5,6,7,8]. Create a new list2 such that Add 10 to the even number and multiply with 5 if it is an odd number in the list1..

```
1 list1 = [3, 4, 5, 6, 7, 8]
2 list2 = []
3
4 for num in list1:
5     if num%2 == 0:
6         list2.append(num+10)
7     else:
8         list2.append(num*5)
9 print(list2)
10
11
```

Console 15/A X

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[MSC v.1929 64 bit (AMD64)]  
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IPython 8.25.0 -- An enhanced Interactive Python.

In [1]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')  
[15, 14, 25, 16, 35, 18]

4. Write a simple user defined function that greets a person in such a way that :
- i) It should accept both the name of the person and message you want to deliver.
  - ii) If no message is provided, it should greet a default message 'How are you'

Ex: Hello ---xxxx---, How are you - default message.

Ex: Hello ---xxxx---, --xx your message xx---

```
1 def greet_person(name, message='How are you'):
2     print(f'Hello{name}, {message}')
3
4 greet_person('saikumar', 'hope you have a great day')
5 greet_person('venkatsai')
6
7
```

Console 16/A X

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IPython 8.25.0 -- An enhanced Interactive Python.

In [1]: runfile('E:/Study material/untitled5.py', wdir='E:/Study material')  
Hello saikumar, hope you have a great day  
Hello venkatsai, How are you

