**Module 2- Assignment Solution Manoj KV on 04/10/2017**

1. Correct the program given below.

**Answer:**

1. Modified the input type – **int()** --since raw input will accept all input as string datatype and here amount is the input .it’s better to type cast as Integer or float .But in the given example, in conditional statements they defined as 50,100, 150 . so, I have used “int” datatype.
2. Also Modified the values of total variable as **integers** 50,100,150

*"""script1.py*

*1. Correct the program given below.  
"""*total = int(raw\_input(**'What is the total amount for your online shopping?'**))  
country = raw\_input(**'Shipping within the US or Canada?'**)  
**if** country == **"US"**:  
 **if** total <= 50:  
 **print "Shipping Costs $6.00"  
 elif** total <= 100:  
 **print "Shipping Costs $9.00"  
 elif** total <= 150:  
 **print "Shipping Costs $12.00"  
 else**:  
 **print "FREE"  
if** country == **"Canada"**:  
 **if** total <= 50:  
 **print "Shipping Costs $8.00"  
 elif** total <= 100:  
 **print "Shipping Costs $12.00"  
 elif** total <= 150:  
 **print "Shipping Costs $15.00"  
 else**:  
 **print "FREE"**

Solution:

What is the total amount for your online shopping?10

Shipping within the US or Canada?US

Shipping Costs $6.00

2. Write a program that uses raw\_input to prompt a user for their name and then welcomes them.

Example: Enter your name: Chuck

Hello Chuck

**Answer:**

*""" script2.py*

*2. Write a program that uses raw\_input to prompt a user for their name and then welcomes them.  
Example: Enter your name: Chuck  
Hello Chuck  
"""*name=raw\_input(**"Enter your name:"**)  
**print "Hello"**+**" "**+str(name)

Solution:

Enter your name:Chuck

Hello Chuck

3. Write a program which prompts the user for a Fahrenheit temperature, convert the temperature to Celsius and print out the converted temperature.

**Answer:**

*# coding=utf-8  
"""script3.py  
3. Write a program which prompts the user for a Fahrenheit temperature,   
convert the temperature to Celsius and   
print out the converted temperature.  
"""*input = raw\_input(**"Enter temperature in Fahrenheit:"**)  
fahren = float(input)  
  
*#Convert Fahrenheit to Celsius : Formula T(°C) = (T(°F) - 32) × 5/9*celsius = (fahren - 32.0) \* 5.0 / 9.0  
**print "Temperature in Celsius is:"**, celsius

Solution:

Enter temperature in Fahrenheit:92

Temperature in Celsius is: 33.3333333333

4. Write a program to prompt the user for hours and rate per hour to compute gross pay.

Example: Enter Hours: 35

Enter Rate: 2.75

Pay: 96.25

**Answer:**

*"""script4.py  
4. Write a program to prompt the user for hours and rate per hour to compute gross pay.  
Example: Enter Hours: 35  
Enter Rate: 2.75  
Pay: 96.25  
"""*hours = float(raw\_input(**"Enter Hours:"**))  
rate = float(raw\_input(**"Enter Hours:"**))  
  
*#pay=hours\*rate*gross\_pay = (hours\*rate)  
**print "Pay:"**,gross\_pay

Solution:

Enter Hours:35

Enter Hours:2.75

Pay: 96.25

5. Write a for loop that prints all elements of a list and their position in the list.

a = [4,7,3,2,5,9]

**Answer:**

*"""script5.py  
5. Write a for loop that prints all elements of a list and their position in the list.   
a = [4,7,3,2,5,9]"""*a = [4,7,3,2,5,9]  
**print "The Given List is"**,a  
  
**print 'The Elements of the list and their positions are as follows'  
for** i **in** a:  
 **print "Element "**,str(i)+**" is at "**+str(a.index(i)+1)+**" position"**

Solution:

The Given List is [4, 7, 3, 2, 5, 9]

The Elements of the list and their positions are as follows

Element 4 is at 1 position

Element 7 is at 2 position

Element 3 is at 3 position

Element 2 is at 4 position

Element 5 is at 5 position

Element 9 is at 6 position

6. Write a program which should create a dictionary of key:values.

'A':1 'B':2 'C':3 . . . . 'Z':26 [Use dictionary comprehension]

**Answer:**

*"""script6.py  
6. Write a program which should create a dictionary of key:values.   
'A':1 'B':2 'C':3 . . . . 'Z':26 [Use dictionary comprehension]  
"""***import** string  
**from** operator **import** itemgetter  
dict = {} *# empty dictionary*input = string.uppercase[:26]  
dict = {str(i): int(input.index(i) + 1) **for** i **in** input}  
**print** dict

Solution:

{'A': 1, 'C': 3, 'B': 2, 'E': 5, 'D': 4, 'G': 7, 'F': 6, 'I': 9, 'H': 8, 'K': 11, 'J': 10, 'M': 13, 'L': 12, 'O': 15, 'N': 14, 'Q': 17, 'P': 16, 'S': 19, 'R': 18, 'U': 21, 'T': 20, 'W': 23, 'V': 22, 'Y': 25, 'X': 24, 'Z': 26}

7. Write a program to reverse/inverse key:value like below.

dict1 = { 'a': 1, 'b':2 }

Expected result : dict2 = { 1: 'a', 2: 'b' }

**Answer:**

*"""script7.py  
7. Write a program to reverse/inverse key:value like below.   
dict1 = { 'a': 1, 'b':2 }   
Expected result : dict2 = { 1: 'a', 2: 'b' }  
"""*dict1 = { **'a'**: 1, **'b'**:2 }  
dict2 = {v:k **for** k,v **in** dict1.items()}  
  
**print "Expected result: dict2 = "**, dict2

Solution:

Expected result: dict2 = {1: 'a', 2: 'b'}

8. Using given list L = ['a', 'b', 'c', 'd'] create a dictionary of key:values.

Expected result {'a': 1, 'c': 3, 'b': 2, 'd': 4} [Hint: Use Enumerate function]

**Answer:**

*"""script8.py  
8. Using given list L = ['a', 'b', 'c', 'd'] create a dictionary of key:values.  
Expected result {'a': 1, 'c': 3, 'b': 2, 'd': 4} [Hint: Use Enumerate function]  
"""*L = [**'a'**, **'b'**, **'c'**, **'d'**]  
dict = dict(enumerate(L))  
dict2 = {v:k+1 **for** k,v **in** dict.items()}  
**print "Expected result: "**,dict2

Solution:

Expected result: {'a': 1, 'c': 3, 'b': 2, 'd': 4}

9. Write a program to prompt for a score between 0.0 and 1.0. If the score is out of range print an error. If the score is between 0.0 and 1.0, print a grade using the following table:

Score Grade

>= 0.9 A

>= 0.8 B

>= 0.7 C

>= 0.6 D

< 0.6 FAIL

Enter score: 0.95

A

Enter score: 11.5

Bad score

Enter score: 10.0

Bad score

Enter score: 0.75

C

Enter score: 0.5

FAIL

**Answer**:

*"""script9.py  
9. Write a program to prompt for a score between 0.0 and 1.0. If the score is out of range print an error. If the score is between 0.0 and 1.0, print a grade using the following table:  
Score Grade  
>= 0.9 A  
>= 0.8 B  
>= 0.7 C  
>= 0.6 D  
< 0.6 FAIL  
Enter score: 0.95  
A  
Enter score: 11.5  
Bad score  
Enter score: 10.0  
Bad score  
Enter score: 0.75  
C  
Enter score: 0.5  
FAIL  
"""***def** score():  
 score = float(input(**"Enter Score:"**))  
 **if** score >= 0.9 **and** score < 1.0:  
 **print "A"  
 elif** score >=0.8 **and** score < 0.9:  
 **print "B"  
 elif** score >=0.7 **and** score < 0.8:  
 **print "C"  
 elif** score >=0.6 **and** score < 0.7:  
 **print "D"  
 elif** score < 0.6:  
 **print "FAIL"  
 else**:  
 **print "Bad Score"**score()  
score()  
score()  
score()  
score()

Solution:

Enter Score:0.95

A

Enter Score:11.5

Bad Score

Enter Score:10.0

Bad Score

Enter Score:0.75

C

Enter Score:0.5

FAIL

--------------------------------------------------------------------------------------