

Python Programming Course

Assignment Questions – Day 1

Assignment 1: Observations from a real world problem - Guided Activity

Problem Description: A retail store management wants to automate the process of generating the bill amount for its customers. As an initial step, they want to initialize the bill details of a customer as given below:

Bill id should be 1001, customer id should be 101 and bill amount should be 199.99. After initializing, all the values must be displayed in the format given below:

bill_id: 1001

customer_id: 101

bill_amount: Rs.199.99

Analyze the above problem statement and answer the following questions:

1. What do you think is needed to write a program to implement the solution for the above problem statement?

Assignment 2: Programming constructs in Python - Guided Activity

Problem Description: For the previous assignment, identify the data types that may be used to represent bill id, customer id and bill amount.

Assignment 3: Programming constructs in Python - Quiz

Problem Description: Predict the output of following Python Statements.

```
print ("Value of e is %0.1f" , 2.713 )
```

```
print ("Value of e is %0.1f" %2.713 )
```

```
print ("Programming in Python: Version %d" %3.5 )
```

```
print ("%20s : %d" % ("Python 3.0 is also known as Python",3000.57 ))
```

```
x=2
```

```
print ("{:0:2d} {1:3d} {2:4d}".format(x, x*x, x*x*x))
```

Assignment 4: Programming constructs in Python - Demo

Problem Description: Write a Pseudocode and Python program to implement the following real world problem:

A retail store management wants to automate the process of generating the bill amount for its customers. As an initial step, they want to initialize the bill details of a customer as given below:

Bill id should be 1001, customer id should be 101 and bill amount should be 199.99. After initializing, all the values must be displayed in the format given below:

bill_id: 1001

customer_id: 101

bill_amount: Rs.199.99

Assignment 5: Programming constructs in Python – Hands on practice

Problem Description: The finance department of a company wants to calculate the monthly pay of one of its employee. Monthly pay should be calculated as mentioned in the below formula and display all the employee details.

Monthly Pay = Number of hours worked in a week * Pay rate per hour * No. of weeks in a month

Note:

- The number of hours worked by the employee in a week should be considered as 40, Pay rate per hour should be considered as Rs.400 and
- Number of weeks in a month should be considered as 4

Write Pseudo code and Python program in Eclipse to implement the above real world problem.

Assignment 6: Programming constructs in Python - Hands - on - Practice

Problem Description: Write the assignment statement to swap 2 numbers x and y? (Without using temp variable)

Assignment 7: Programming constructs in Python - Guided Activity

Problem Description: Predict the output of following code snippet

```
Num = 16
num1 = num/6
num2 = num//6
num3 = num//6.0
print (num1)
print (num2); print(num3)
```

Assignment 8: id() and type() functions - Quiz

Problem Description: Dry run the below code snippets and predict the output.

Code – 1:

```
obj_x = 10
obj_y = obj_x
if ( id(obj_x) == id(obj_y) ):
    print("Address of obj_x and obj_y is same") else:
    print("Address of obj_x and obj_y is not same")
```

Code – 2:

```
obj_x = 10
obj_y = obj_x
if ( obj_x is obj_y ):
    print("obj_x and obj_y have same identity") else:
    print("obj_x and obj_y do not have same identity")
```

Code – 3:

```
obj_x = 10
obj_y = obj_x obj_y = obj_x + 1
if ( obj_x is not obj_y ):
    print("obj_x and obj_y do not have same identity") else:
    print("obj_x and obj_y have same identity")
```

Code – 4:

```
int_a = 10
raw_input = input("Enter a number")
print("Type of int_a:", type(int_a)) print("Type of raw_input:", type(raw_input)) print(int_a
+ raw_input)
```

Assignment 9: Coding Standards - Guided Activity

Problem Description: Coding standards are very important for maintenance of code and for understanding of the code. Identify the sections of the given program where the coding standards are not followed and correct them

```
itemNo=1005
unitprice = 250
quantity = 2
amount=quantity*unitprice
print("Item No:",itemNo)
print("Bill Amount:",amount)
```