



Software Development-Assessment 1

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## Q1

Variables are used to store values in a program. It is a placeholder that enables programmers to work with different data types. such a numbers (integers), letters(string) decimals(float), True or false(boolean)

variable name must have to be a letter or an underscore character (`_`), they can only be alpha-numeric character, underscore, (capital letters A-Z, or small letters a-z, alpha-numeric, 0-9) special characters such as `?!-$%^` cannot be used  
variable names is case sensitive (ie MYHOUSE, myhouse, MyHouse are not the same)

variables can be used in the `print()`.

```
myclour ="blue"
```

```
myLocation="dublin"
```

```
print(myclour)
```

```
print(myLoation)
```

Output:

```
blue
```

```
dublin
```

variables can be Added as two sum `a+b`

```
a= int(input("Enter the value of a"))
```

```
b= int(input("Enter the value of b"))
```

```
print("The sum of a and b is :",a+b)
```

## Q2

If statement program used for decision making

the values of two operands are equal or the same, then the condition is regarded as true.(==)

also if the value of two operands are not the same, condition becomes true, in the if statements,

conditions can be greater than >, less than <, >=, <=, ==,

!=

if the logical of both are true then the condition can be true, otherwise false.

if statements enable you to perform or execute a piece of code, if some certain conditions are met.

For If a statement in a certain expression is True then it will be executed.

Otherwise another statement under, elif condition which can be used for multiple expressions expected,

however, when false then the else part will be executed.

```
if day == 1 or day == 21 or day == 31:
```

```
    print("st", end=" ")
```

```
elif day == 2 or day == 22:
```

```
    print("nd", end=" ")
```

```
elif day == 3 or day == 23:
```

```
    print("rd", end=" ")
```

```
else:
```

```
    print("th", end=" ")
```

```
print(month, end=" ")
```

```
print(year)
```

Q3

loops helps to repeat sections of codes in programming,  
Therefore, it allows code to be written once and repeated or run many times as needed.  
two types of loop in python,

For loop operation in python is used iterating over a sequence (iterating\_var in sequence )  
statement that can be a list, string, set numbers.

with numbers declared in the range.

**for i in range(5):**

    print("i")

Output:

0

1

2

3

4

**For in a list**

colours=['black', 'blue', 'yellow', 'white']

for i in colours:

    print (i)

output:

black

Blue

yellow

white

while loop executes if the conditions are true or false. when the expression evaluates to TRUE,  
then the statements will be executed

i=1

while(i<=6):

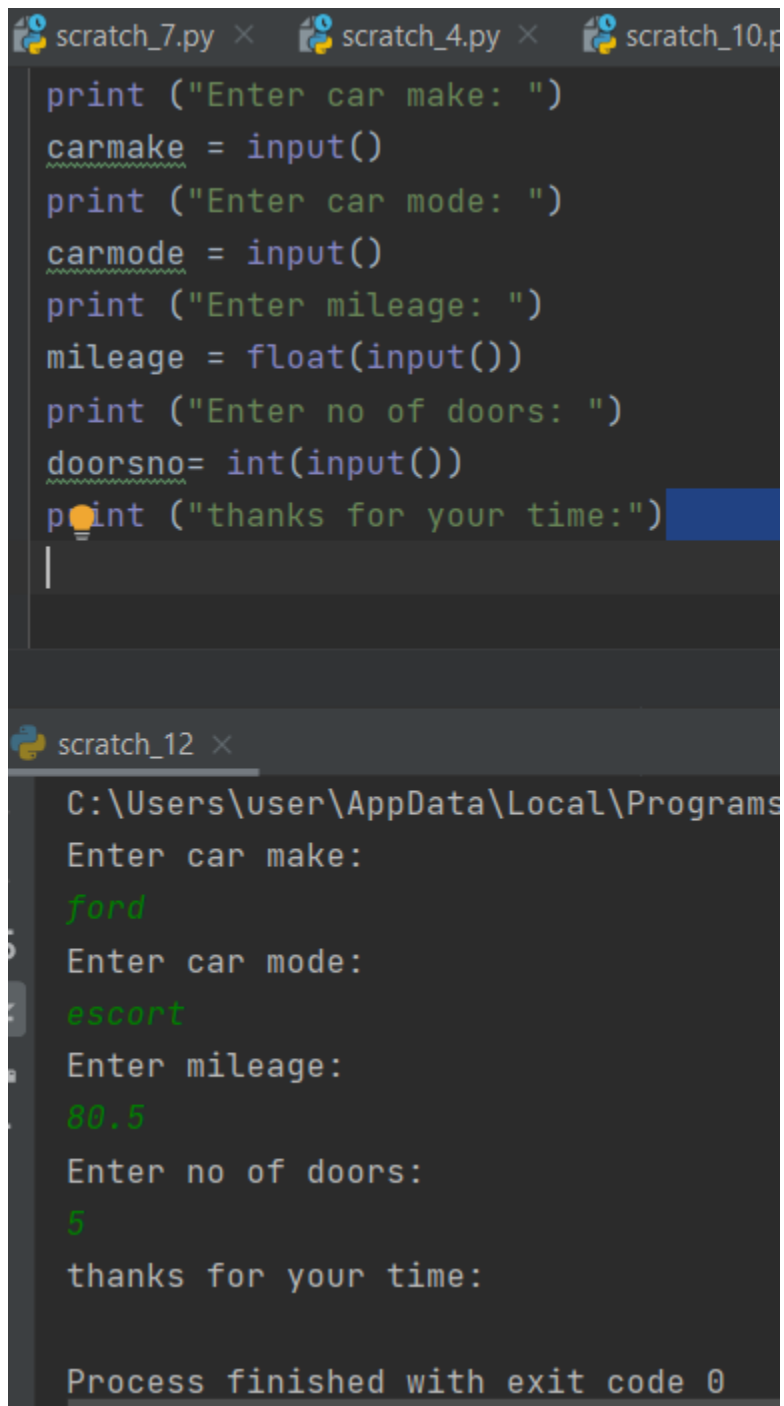
    print(i)

    i=i+2

Output.

1,3,5

## Assessment 2



The image shows a Python IDE with two windows. The top window, titled 'scratch\_7.py', contains the following code:

```
print ("Enter car make: ")
carmake = input()
print ("Enter car mode: ")
carmode = input()
print ("Enter mileage: ")
mileage = float(input())
print ("Enter no of doors: ")
doorsno= int(input())
print ("thanks for your time:")
```

The bottom window, titled 'scratch\_12', shows the execution output of the program:

```
C:\Users\user\AppData\Local\Programs
Enter car make:
ford
Enter car mode:
escort
Enter mileage:
80.5
Enter no of doors:
5
thanks for your time:

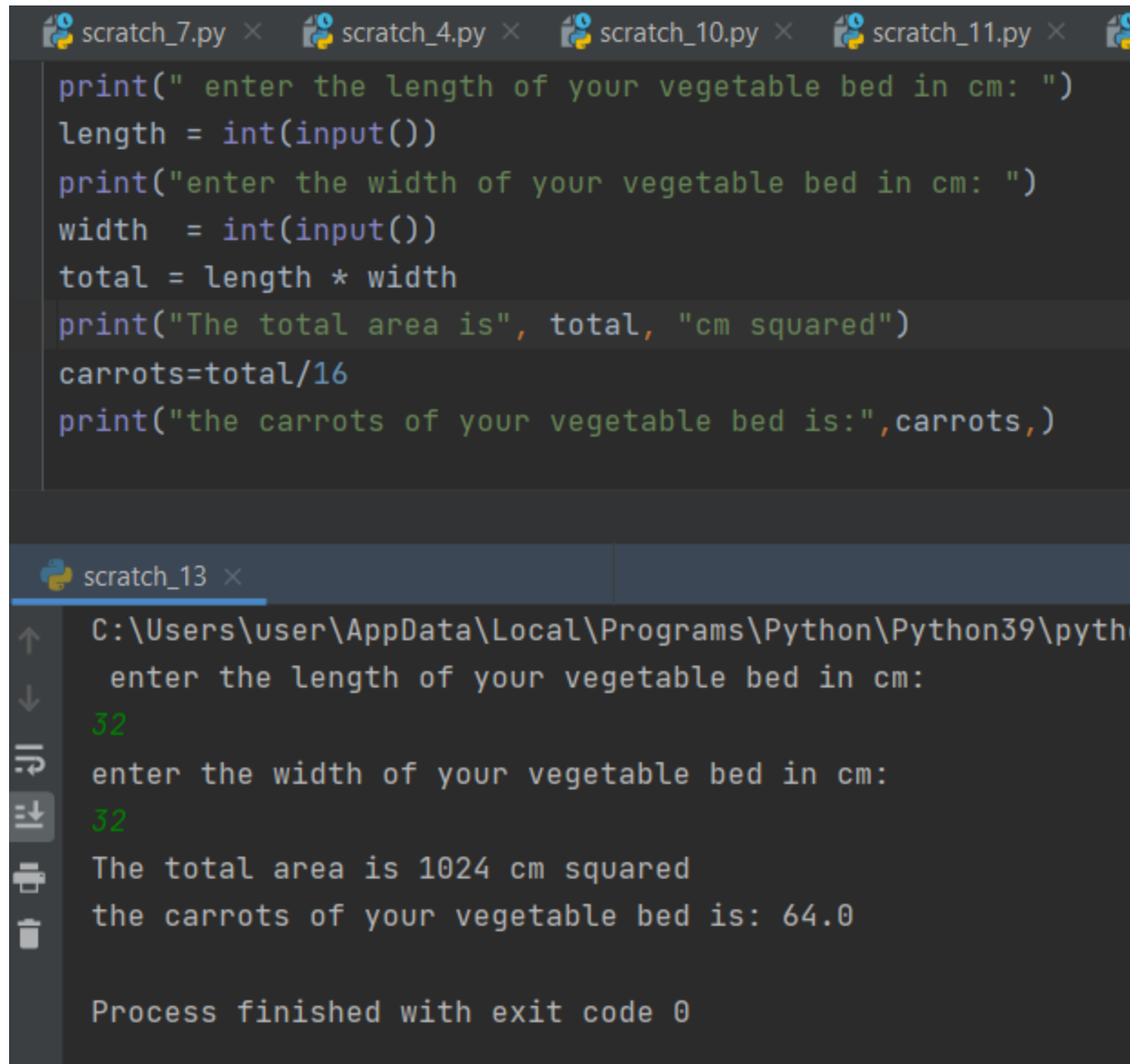
Process finished with exit code 0
```

Q1

```
print ("Enter car make: ")
carmake = input()
print ("Enter car mode: ")
```

```
carmode = input()
print ("Enter mileage: ")
mileage = float(input())
print ("Enter no of doors: ")
doorsno= int(input())
print ("thanks for your time:")
```

Q2



The screenshot shows a Python IDE with multiple tabs. The active tab is 'scratch\_13.py'. The code in the editor is as follows:

```
print(" enter the length of your vegetable bed in cm: ")
length = int(input())
print("enter the width of your vegetable bed in cm: ")
width = int(input())
total = length * width
print("The total area is", total, "cm squared")
carrots=total/16
print("the carrots of your vegetable bed is:",carrots,)
```

The output window shows the execution of the program:

```
C:\Users\user\AppData\Local\Programs\Python\Python39\python.exe
enter the length of your vegetable bed in cm:
32
enter the width of your vegetable bed in cm:
32
The total area is 1024 cm squared
the carrots of your vegetable bed is: 64.0

Process finished with exit code 0
```

```
print(" enter the length of your vegetable bed in cm: ")
length = int(input())
print("enter the width of your vegetable bed in cm: ")
width = int(input())
total = length * width
print("The total area of your room is", total, "cm squared")
carrots=total/64
print("the carrots of your vegetable bed is:",carrots,)
```

```
scratch_15.py x scratch_11.py x scratch_3.py x scratch.py x so
theNames = ["pizza", "chips", "tea", "coffee", "banana"]
theTel     = [3.45, 1.20, 1.35, 1.82, 0.17]
total = sum(theTel)
print ("enter product 5 ")
choice = input()
print("enter price 5 ")
choice= float(input())
for counter in range(0, 5):
    print(theNames[counter], " ",theTel[counter])
total = sum(theTel)
print ("total price is",total)
discount=total*(15/100)
print("the price after discount is",discount)
```

scratch\_18 x

```
C:\Users\user\AppData\Local\Programs\Python\Python39\pyt
enter product 5
banana
enter price 5
0.17
pizza    3.45
chips    1.2
tea      1.35
coffee   1.82
banana   0.17
total price is 7.99
the price after discount is 1.1985
```

Q3

```
products = []
price = []
for counter in range(0,5):
    print("Enter product: ")
    products.append(input())
    print ("Enter product:")
    price.append(int(input()))
    print("product Enter? ")
for counter in range(0,6):
    print(products[counter], price [counter] ")
    print(" total price :")
    total=len*price
    print(" discount :")
    discount=total-15%
```

4.

```
import random
def operation(1,10):
print (choose your position:(1,10))
if (choice==3):
print("miss! unlucky")
    print("000X")
    print("0000")
    print("0000")
elif(choice==6):
    print("miss! unlucky")
    print("000X")
    print("0000")
    print("0000")
elif(choice==11):
    print("win, well done")
```

## References,

[1]

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<https://www.w3schools.com/python/default.asp> (accessed Apr. 03, 2021).

[3]

Python, (view online)“Welcome to Python.org,” Python.org, May 29, 2019.  
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[4]

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<http://www.openbookproject.net/thinkcs/python/english2e/ch01.html> (accessed Apr. 10, 2021).