Q.3b.

Squre of n numbers

```
for n in[0,1,2,3,4,5,6,4,8,9]:
square=n**2
print(n,'squared is',square)
print('the for loop is completed!')
```

output

```
0 squared is 0
the for loop is completed!
1 squared is 1
the for loop is completed!
2 squared is 4
the for loop is completed!
3 squared is 9
the for loop is completed!
4 squared is 16
the for loop is completed!
5 squared is 25
the for loop is completed!
6 squared is 36
the for loop is completed!
4 squared is 16
the for loop is completed!
8 squared is 64
the for loop is completed!
9 squared is 81
the for loop is completed!
```

Q.3c.

Form a list of wowles selected from a given word

```
str1=input("enter a string:")
str1_lower=str1.lower()
vowels="aeiou"
count=0
for i in str1_lower:
    if i in vowels:
        count=count+1
        print(i)
        print("count of vowels in the given string:",count)
```

output

```
enter a string:ammu
a
count of vowels in the given string: 1
u
count of vowels in the given string: 2
```

Q.4

count the occurrences of each word in a line of text

```
def word_count(str):
    counts = dict()
    words = str.split()

    for word in words:
        if word in counts:
            counts[word] += 1
        else:
            counts[word] = 1
```

```
    return counts


print( word_count(' i love my india.'))
```

output

{'i': 1, 'love': 1, 'my': 1, 'india.': 1}

Q.6

Store list of first name .counte the occurrences of ‘a’ within the list

```
  test_str = "hai ammus"
count = 0


for i in test_str:
   if i == 'a':
      count = count + 1



print ("Count of a in hai ammus  is : "
                    +  str(count))
```

Output

Count of a in hai ammus is : 2

Q.7

Enter 2 lists of integers .check

a. Whether list are of same length
b. Whether lists sums to same value
c. Whether any value occur in both

Output

```
def lists():
      list1=[]
          list2=[]
          list3=[]
          n1=int(input("total number of elements in list 1:"))
          for i in range(n1):
           val=int(input("enter a number":))
           list1.append(val)
```

```
        n2=int(input("total number of elements in list 2:"))
       for i in range(n1):
        val=int(input("enter a number":))
        list1.append(val)
        if(n1==n2):
              print("list are of same length")
              else:
                    print("list are of  not same length")
        if(sum(list1)==sum(list2)):
              print("sum value is same")

              else:
                    print("sum value is not same")
    list3=[each for each in list1 if each in list2]
    print("values in the both list are:",list3)


    lists()
```

output

```
total number of elements in list 1:4
enter a number:5
enter a number:6
enter a number:2
enter a number:4
total number of elements in the list 2:5
enter a number:2
enter a number:5
enter a number:7
enter a number:8
enter a number:9
list are not same length:
sum value is not same
values in the both lists are: [5, 2]
```

Q.8 get a string from an input string where occurrences of first character replaced with $ except first character

```
def change_char(str1):
  char = str1[0]
  str1 = str1.replace(char, '$')
  str1 = char + str1[1:]

  return str1

print(change_char('ammuas'))
```

output

ammu$s

Q.9 Create a string from given string where first and last characters exchanged.

```
str = input("Enter a string : ")
new_str = str[-1:] + str[1:-1] + str[:1]
print(new_str)
```

output

Enter a string : hai

iah

Q.10

Accept the radius from user and find area of circle.

```
import math
r = float(input("Enter the radius of the circle: "))
area = math.pi* r * r
print("%.2f" %area)
```

output

Enter the radius of the circle: 5

78.54

Q.14. Accept an integer n and compute n+nn+nnn.

```
n=int(input("Enter a number n: "))
temp=str(n)
t1=temp+temp
```

```
t2=temp+temp+temp
comp=n+int(t1)+int(t2)
print("The value is:",comp)
```

OUTPUT

```
Enter a number n: 1
The value is: 123
```

Q.17. Sort dictionary in ascending and descending order.

```
import operator

d = {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}

print('dictionary : ',d)

s= sorted(d.items(), key=operator.itemgetter(1))

print('ascending order : ',s)

s1= dict( sorted(d.items(), key=operator.itemgetter(1),reverse=True))

print('descending order : ',s1)
```

output

```
dictionary :  {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}
ascending order :  [(0, 0), (2, 1), (1, 2), (4, 3), (3, 4)]
descending order :  {3: 4, 4: 3, 1: 2, 2: 1, 0: 0}
```

Q.18. Merge two dictionaries.

```
x = {'a': 1, 'b': 2}
y = {'b': 10, 'c': 11}
z = x.update(y)
print(z)
print(x)
```

ouput

None

{'a': 1, 'b': 10, 'c': 11}

Q.19. Find gcd of 2 numbers.

```
num1 = int(input("Enter 1st number: "))
num2 = int(input("Enter 2nd number: "))
i = 1
while(i <= num1 and i <= num2):
  if(num1 % i == 0 and num2 % i == 0):
    gcd = i
  i = i + 1
print("GCD is", gcd)
```

ouput

Enter 1st number: 12

Enter 2nd number: 6

GCD is 6