

OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Qc.py
Degree: 30
0.5235987755982988
student@c05-60:~/Desktop$ python3 Qc.py
Degree: 45
0.7853981633974483
student@c05-60:~/Desktop$ python3 Qc.py
Degree: 180
3.141592653589793
student@c05-60:~/Desktop$
```

OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Qd.py
Height: 23
Radius: 34
Volume is: 83528.66547364542
Surface Area is: 12176.813125314038
student@c05-60:~/Desktop$ python3 Qd.py
Height: 1
Radius: 2
Volume is: 12.566370614359172
Surface Area is: 37.69911184307752
student@c05-60:~/Desktop$ python3 Qd.py
Height: 23
Radius: 3
Volume is: 650.3096792930871
Surface Area is: 490.0884539600077
student@c05-60:~/Desktop$
```

OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Qb.py
0
8
9
2022-06-24
student@c05-60:~/Desktop$ python3 Qb.py
2
5
0
2022-03-06
student@c05-60:~/Desktop$ python3 Qb.py
4
8
6
2019-06-15
student@c05-60:~/Desktop$ python3 Qb.py
4
7
6
2020-05-11
student@c05-60:~/Desktop$
```

OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Qa.py
SwVbzDajacpbuPswTDcfZWjwPzWEwlihkMYQsnRVrFFxqoeoAfcJEJpJSZXVDYLATacEFUBjtEPCISTG
CyJXErWWQsQXXNYSauro
2
0
student@c05-60:~/Desktop$ python3 Qa.py
SdKnqKhamqpzvBHvEaAMGurtiALtEkIIFXKiwyVxnYoEEsskYqWxKMzphBNMjSRuXGRZUmaETVtJyZZS
TLHIAaphpsJXrjRbYsIf
3
56
student@c05-60:~/Desktop$ python3 Qa.py
PeYXEcrcQKvwNzptKSnldOMaBkweNCduqkQwbFvFrq0cLPFOQpyAKIeJSPLELWEvPpEdvWQKp0pCd
Bkc0sRbzNWwh0kNdVpen
2
63
student@c05-60:~/Desktop$ python3 Qa.py
ktbkzNmECJzRsYJevafxbNDSapymamukGzEIRnJzEYaAbgnMirXBJxrbpmOfVJhZUecFmyCtwxChvqab
AyikHjZMwoQfUoEcvCsW
3
35
student@c05-60:~/Desktop$
```

OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Q5.py
Enter pattern to search: Write
5
student@c05-60:~/Desktop$ python3 Q5.py
Enter pattern to search: a
24
student@c05-60:~/Desktop$ python3 Q5.py
Enter pattern to search: program
5
student@c05-60:~/Desktop$ cat test2.txt
1. Write a Python program to read first n lines of a file
2. Write a Python program to count the number of lines in a text file.
3. Write a Python program to write a list to a file.
4. Write a Python program to copy the contents of a file to another file .
5. Write a Python program to take a file name and a string pattern from the user
. Now print the number of occurrence of the pattern string found in the file.
student@c05-60:~/Desktop$
```

OUTPUT


```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Q4.py
student@c05-60:~/Desktop$ cat test2.py
cat: test2.py: No such file or directory
student@c05-60:~/Desktop$ cat test2.txt
1. Write a Python program to read first n lines of a file
2. Write a Python program to count the number of lines in a text file.
3. Write a Python program to write a list to a file.
4. Write a Python program to copy the contents of a file to another file .
5. Write a Python program to take a file name and a string pattern from the user
. Now print the number of occurrence of the pattern string found in the file.
student@c05-60:~/Desktop$
```


OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Q3.py
Enter list: 12 23 34 45
student@c05-60:~/Desktop$ python3 Q3.py
Enter list: 12 23 34
student@c05-60:~/Desktop$ cat test1.txt
12 23 34 student@c05-60:~/Desktop$ python3 Q3.py
Enter list: 34 45 43 56
student@c05-60:~/Desktop$ cat test1.txt
34 45 43 56 student@c05-60:~/Desktop$
```

OUTPUT

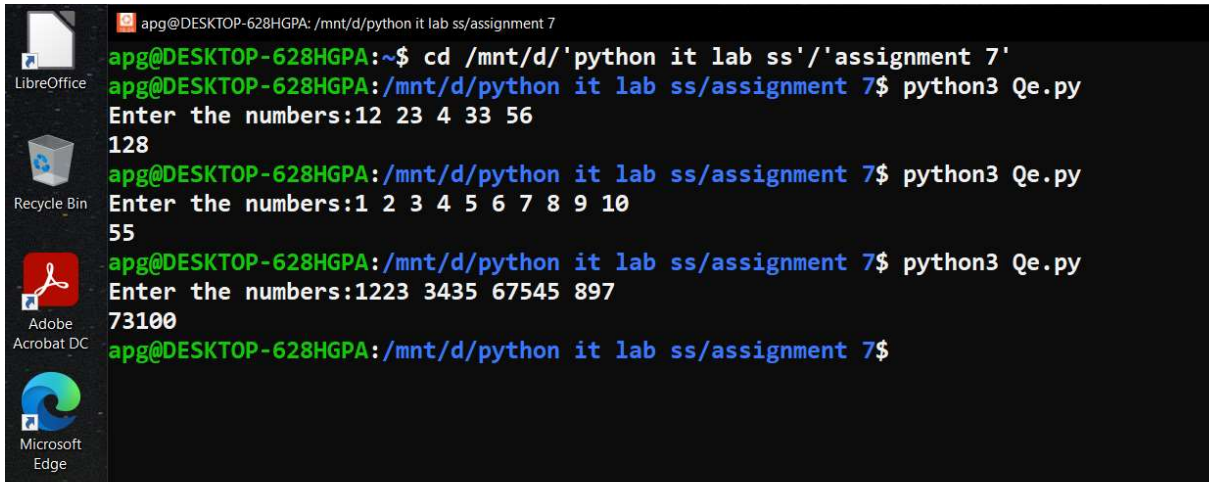
```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Q2.py
5
student@c05-60:~/Desktop$
```

A screenshot of a Linux terminal window with a dark purple background. The window title bar shows 'student@c05-60: ~/Desktop'. On the left side, there is a vertical dock with several application icons: a red circle with a white gear, a silver floppy disk, the Firefox logo, a silver digital camera, a document with a pencil, a terminal icon, and a folder icon. The terminal text shows the user running 'python3 Q2.py', which outputs '5'. The prompt returns to 'student@c05-60:~/Desktop\$' with a white cursor.

OUTPUT

```
student@c05-60: ~/Desktop
student@c05-60:~/Desktop$ python3 Q1.py
Enter number of lines to read: 3
1. Write a Python program to read first n lines of a file
2. Write a Python program to count the number of lines in a text file.
3. Write a Python program to write a list to a file.
student@c05-60:~/Desktop$ python3 Q1.py
Enter number of lines to read: 2
1. Write a Python program to read first n lines of a file
2. Write a Python program to count the number of lines in a text file.
student@c05-60:~/Desktop$ python3 Q1.py
Enter number of lines to read: 1
1. Write a Python program to read first n lines of a file
student@c05-60:~/Desktop$ python3 Q1.py
Enter number of lines to read: 4
1. Write a Python program to read first n lines of a file
2. Write a Python program to count the number of lines in a text file.
3. Write a Python program to write a list to a file.
4. Write a Python program to copy the contents of a file to another file .
student@c05-60:~/Desktop$
```

OUTPUT



```
apg@DESKTOP-628HGPA: /mnt/d/python it lab ss/assignment 7
apg@DESKTOP-628HGPA:~$ cd /mnt/d/'python it lab ss'/'assignment 7'
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qe.py
Enter the numbers:12 23 4 33 56
128
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qe.py
Enter the numbers:1 2 3 4 5 6 7 8 9 10
55
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qe.py
Enter the numbers:1223 3435 67545 897
73100
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$
```

The image shows a terminal window with a dark background. On the left side, there is a vertical taskbar with icons for LibreOffice, Recycle Bin, Adobe Acrobat DC, and Microsoft Edge. The terminal text is as follows:

apg@DESKTOP-628HGPA: /mnt/d/python it lab ss/assignment 7

apg@DESKTOP-628HGPA:~\$ cd /mnt/d/'python it lab ss'/'assignment 7'

apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7\$ python3 Qe.py

Enter the numbers:12 23 4 33 56

128

apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7\$ python3 Qe.py

Enter the numbers:1 2 3 4 5 6 7 8 9 10

55

apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7\$ python3 Qe.py

Enter the numbers:1223 3435 67545 897

73100

apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7\$

OUTPUT

```
apg@DESKTOP-628HGPA: /mnt/d/python it lab ss/assignment 7
apg@DESKTOP-628HGPA:~$ cd /mnt/d/'python it lab ss'/'assignment 7'
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qd.py
Enter the number of rows:3
1
1 1
1 2 1
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qd.py
Enter the number of rows:4
1
1 1
1 2 1
1 3 3 1
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qd.py
Enter the number of rows:5
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$
```

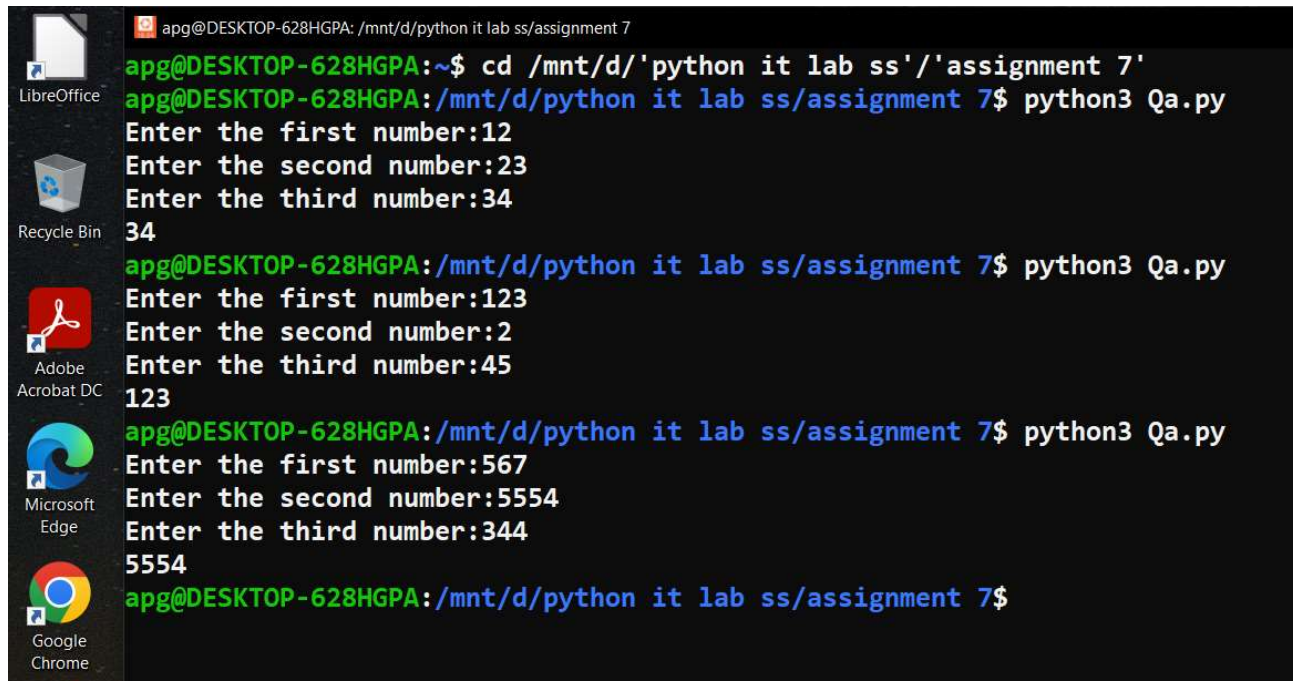
OUTPUT

```
apg@DESKTOP-628HGPA: /mnt/d/python it lab ss/assignment 7
apg@DESKTOP-628HGPA:~$ cd /mnt/d/'python it lab ss'/'assignment 7'
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qc.py
Enter the string:Hello World
Original String : Hello World
No. of Upper case characters : 2
No. of Lower case Characters : 8
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qc.py
Enter the string:HELLO
Original String : HELLO
No. of Upper case characters : 5
No. of Lower case Characters : 0
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qc.py
Enter the string:hello india
Original String : hello india
No. of Upper case characters : 0
No. of Lower case Characters : 10
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ _
```

OUTPUT

```
apg@DESKTOP-628HGPA: /mnt/d/python it lab ss/assignment 7
apg@DESKTOP-628HGPA:~$ cd /mnt/d/'python it lab ss'/'assignment 7'
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qb.py
Enter the list of numbers:12 23 34 4 5
187680
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qb.py
Enter the list of numbers:1 2 3
6
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qb.py
Enter the list of numbers:12 12
144
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qb.py
Enter the list of numbers:11 11 11
1331
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ _
```

OUTPUT



```
apg@DESKTOP-628HGPA: /mnt/d/python it lab ss/assignment 7
apg@DESKTOP-628HGPA:~$ cd /mnt/d/'python it lab ss'/'assignment 7'
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qa.py
Enter the first number:12
Enter the second number:23
Enter the third number:34
34
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qa.py
Enter the first number:123
Enter the second number:2
Enter the third number:45
123
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$ python3 Qa.py
Enter the first number:567
Enter the second number:5554
Enter the third number:344
5554
apg@DESKTOP-628HGPA:/mnt/d/python it lab ss/assignment 7$
```


OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc qi.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array: 4
Enter the elements of the array:
Enter element 1: 12
Enter element 2: 23
Enter element 3: 3
Enter element 4: 45
The array is: 12 23 3 45
The sorted array is: 3 12 23 45
Enter the key to be searched: 12
Interpolation Search
Comparison 1
lo : 0, arr[0] = 3
hi : 3, arr[3] = 45
mid = 0
Comparison 2
lo : 1, arr[1] = 12
hi : 3, arr[3] = 45
mid = 1
Total comparisons made: 2student@c05-60:~/Desktop/13000121058$
```

OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc Question.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Press 1. Insert  2. Display  3. Search  4.Exit
1
enter a value to insert into hash table
12
Press 1. Insert  2. Display  3. Search  4.Exit
1
enter a value to insert into hash table
2
Press 1. Insert  2. Display  3. Search  4.Exit
1
enter a value to insert into hash table
34
Press 1. Insert  2. Display  3. Search  4.Exit
2
elements in the hash table are
at index 0      value = 0
at index 1      value = 0
at index 2      value = 12
at index 3      value = 2
at index 4      value = 34
at index 5      value = 0
at index 6      value = 0
at index 7      value = 0
at index 8      value = 0
at index 9      value = 0
Press 1. Insert  2. Display  3. Search  4.Exit
3
enter search element
12
value is found at index 2
Press 1. Insert  2. Display  3. Search  4.Exit
4
student@c05-60:~/Desktop/13000121058$
```

OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc Binary.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array:4
Enter the elements of the array:45
7
8
9
Enter the element to be searched:8
The element is found at position 3
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array:4
Enter the elements of the array:78
89
56
5
Enter the element to be searched:5
The element is not foundstudent@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array:3
Enter the elements of the array:5
6
87
Enter the element to be searched:0
The element is not foundstudent@c05-60:~/Desktop/13000121058$
```

OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc quick.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter number of elements: 4
Enter elements of Array:
45
78
89
5
The sorted array is
5 45 78 89
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter number of elements: 4
Enter elements of Array:
1
2
3
4
The sorted array is
1 2 3 4
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter number of elements: 3
Enter elements of Array:
89
78
5
The sorted array is
5 78 89
student@c05-60:~/Desktop/13000121058$
```

OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc Merge.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array:4
Enter the elements of the array:45
8
7
89
The sorted array is:7 8 45 89 student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array:3
Enter the elements of the array:45
56
7
The sorted array is:7 45 56 student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array:5
Enter the elements of the array:45
78
5
6
47
The sorted array is:5 6 45 47 78 student@c05-60:~/Desktop/13000121058$
```


OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc Insertion.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array
4
Enter the elements of the array
78
789
5
45
The sorted array is
5
45
78
789
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array
3
Enter the elements of the array
45
7
89
The sorted array is
7
45
89
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the number of elements in the array
2
Enter the elements of the array
45
7
The sorted array is
7
45
student@c05-60:~/Desktop/13000121058$
```


OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc qp.c
student@c05-60:~/Desktop/13000121058$ ./a.out
1.Enqueue      2.Dequeue    3.Display     4.Exit
1
Enter data to be enqueued
12
1.Enqueue      2.Dequeue    3.Display     4.Exit
1
Enter data to be enqueued
23
1.Enqueue      2.Dequeue    3.Display     4.Exit
1
Enter data to be enqueued
3
1.Enqueue      2.Dequeue    3.Display     4.Exit
1
Enter data to be enqueued
56
1.Enqueue      2.Dequeue    3.Display     4.Exit
3
12 23 3 56
1.Enqueue      2.Dequeue    3.Display     4.Exit
2
The dequeued element is
12
1.Enqueue      2.Dequeue    3.Display     4.Exit
2
The dequeued element is
23
1.Enqueue      2.Dequeue    3.Display     4.Exit
3
3 56
1.Enqueue      2.Dequeue    3.Display     4.Exit
4
student@c05-60:~/Desktop/13000121058$
```

OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc expression.c
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the expression: ABC*+D/
The Inorder Traversal of Expression Tree: A + B * C / D
The Preorder Traversal of Expression Tree: / + A * B C D
The Postorder Traversal of Expression Tree: A B C * + D /
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the expression: ABCD*+/+
The Inorder Traversal of Expression Tree: A + B / C * D
The Preorder Traversal of Expression Tree: + A / B * C D
The Postorder Traversal of Expression Tree: A B C D * / +
student@c05-60:~/Desktop/13000121058$ ./a.out
Enter the expression: ABC8/
The Inorder Traversal of Expression Tree: C / 8
The Preorder Traversal of Expression Tree: / C 8
The Postorder Traversal of Expression Tree: C 8 /
student@c05-60:~/Desktop/13000121058$
```

OUTPUT

```
student@c05-60: ~/Desktop/13000121058
student@c05-60:~/Desktop/13000121058$ gcc nb.c
student@c05-60:~/Desktop/13000121058$ ./a.out
- N Bishop Problem Using Backtracking -

Enter number of Bishop: 4

Solution 1:
      1      2      3      4
1      B      -      -      -
2      B      -      -      -
3      B      -      -      -
4      B      -      -      -

Solution 2:
      1      2      3      4
1      B      -      -      -
2      B      -      -      -
3      -      -      -      B
4      B      -      -      -

Solution 3:
      1      2      3      4
1      B      -      -      -
2      B      -      -      -
3      -      -      -      B
4      -      B      -      -

Solution 4:
      1      2      3      4
```

OUTPUT

```
apg@DESKTOP-628HGPA: /mnt/d
apg@DESKTOP-628HGPA:/mnt$ clear
apg@DESKTOP-628HGPA:/mnt$ cd /mnt/d
apg@DESKTOP-628HGPA:/mnt/d$ gcc n_castle.c
apg@DESKTOP-628HGPA:/mnt/d$ ./a.out
- N Castle Problem Using Backtracking -

Enter number of Castle: 4

Solution 1:
    1      2      3      4
1    C      -      -      -
2    -      C      -      -
3    -      -      C      -
4    -      -      -      C

Solution 2:
    1      2      3      4
1    C      -      -      -
2    -      C      -      -
3    -      -      -      C
4    -      -      C      -
```