OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ python 8queens.py
[1, 0, 0, 0, 0, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 1]
[1, 0, 0, 0, 0, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 0]


[7, 1, 3, 0, 6, 4, 2, 5]


[0, 0, 0, 1, 0, 0, 0, 0]
[0, 1, 0, 0, 0, 0, 0, 0]
[0, 0, 0, 0, 0, 0, 1, 0]
[0, 0, 1, 0, 0, 0, 0, 0]
[0, 0, 0, 0, 0, 1, 0, 0]
[0, 0, 0, 0, 0, 0, 0, 1]
[0, 0, 0, 0, 1, 0, 0, 0]
[1, 0, 0, 0, 0, 0, 0, 0]
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$
```

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ python binarySearch.py
Enter size of array :
10
Enter unsorted elements of array :
8
6
4
1
2
3
9
7
5
0
Enter number to be searched :
3
Key was found at position = 4
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$
```

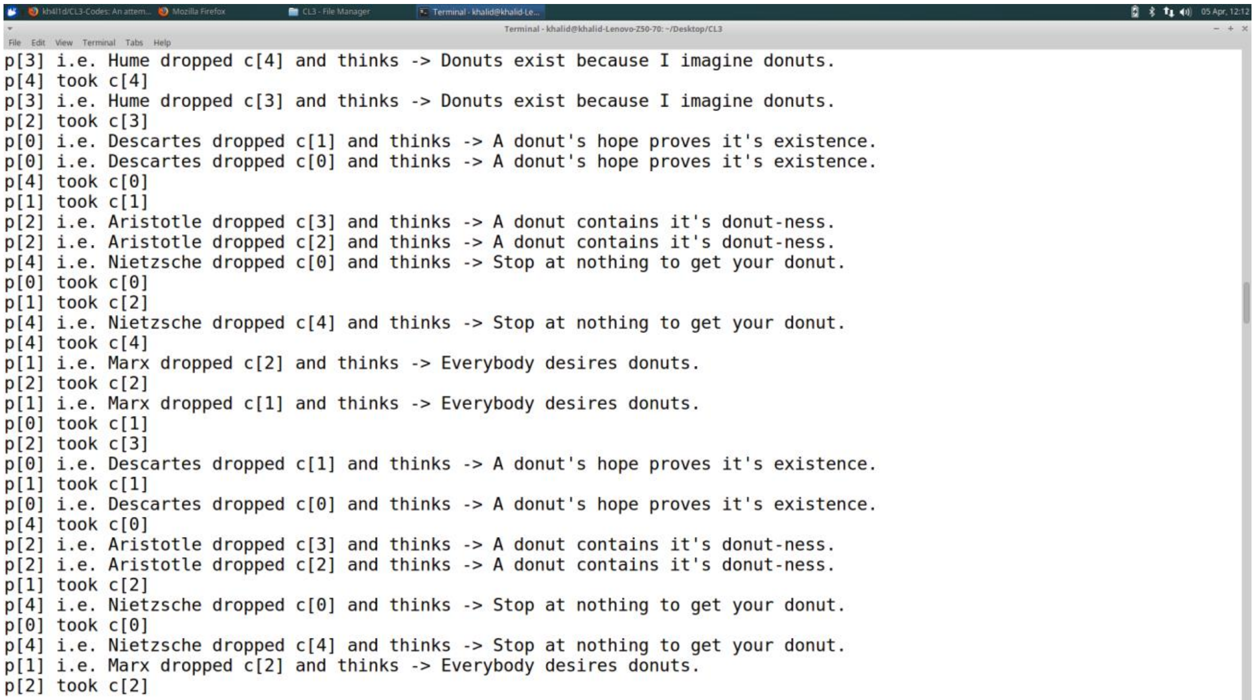
OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/Booths$ python client.py

Enter the multiplicand :
64

Enter the multiplier :
48

Enter the multiplicand's bit form's length :
10

Enter the multiplier's bit form's length :
10

khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/Booths$
```

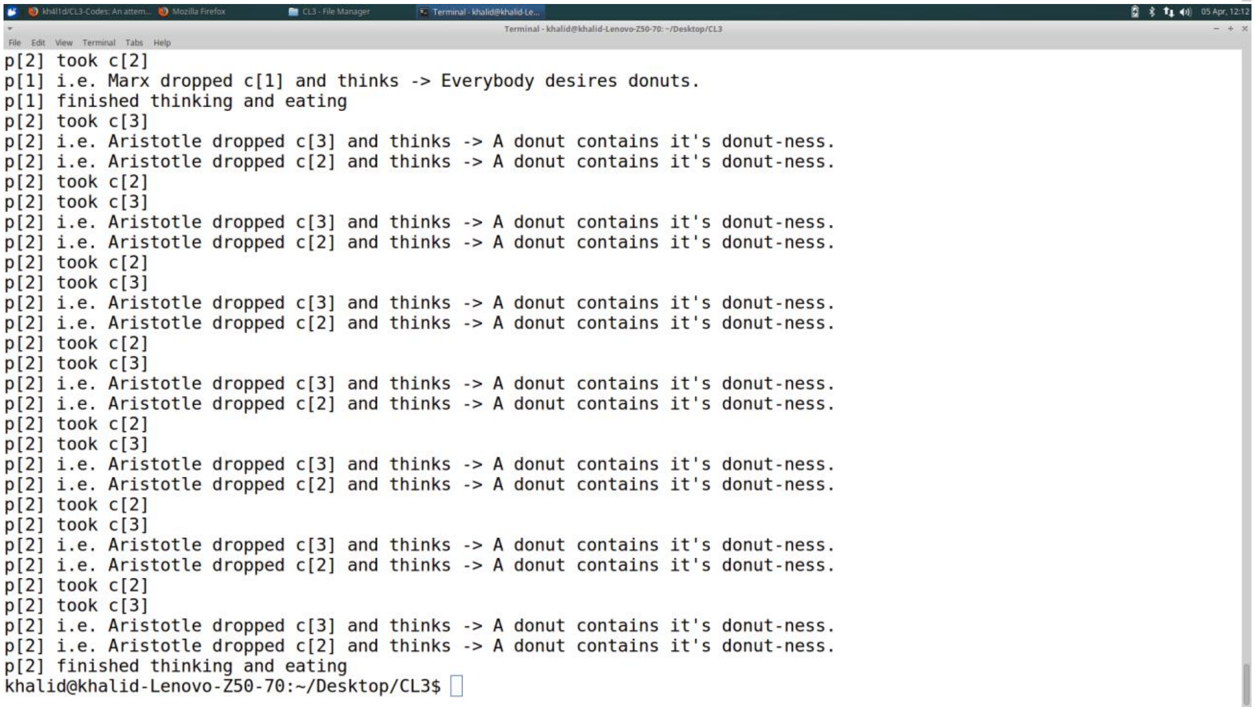
```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/Booths$ python server.py
Initial values
A 00010000000000000000
S 11110000000000000000
P 00000000000001100000
Starting calculation
P >> 1: 00000000000000110000
P >> 1: 00000000000000011000
P >> 1: 00000000000000001100
P >> 1: 00000000000000000110
P +  S: 11110000000000000110
P >> 1: 11111000000000000011
P >> 1: 11111100000000000001
P +  A: 00001100000000000001
P >> 1: 00000110000000000000
P >> 1: 00000011000000000000
P >> 1: 00000001100000000000
P >> 1: 00000000110000000000
P >> 1: 00000000011000000000

The product of 64 and 48 is = 3072

khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/Booths$
```

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ python diningPhilosophers.py
p[0] took c[0]
p[1] took c[1]
p[2] took c[2]
p[3] took c[3]
p[3] took c[4]
p[3] i.e. Hume dropped c[4] and thinks -> Donuts exist because I imagine donuts.
p[3] i.e. Hume dropped c[3] and thinks -> Donuts exist because I imagine donuts.
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[3] took c[3]
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[1] took c[2]
p[3] took c[4]
p[1] i.e. Marx dropped c[2] and thinks -> Everybody desires donuts.
p[1] i.e. Marx dropped c[1] and thinks -> Everybody desires donuts.
p[0] took c[1]
p[3] i.e. Hume dropped c[4] and thinks -> Donuts exist because I imagine donuts.
p[4] took c[4]
p[3] i.e. Hume dropped c[3] and thinks -> Donuts exist because I imagine donuts.
p[0] i.e. Descartes dropped c[1] and thinks -> A donut's hope proves it's existence.
p[1] took c[1]
p[0] i.e. Descartes dropped c[0] and thinks -> A donut's hope proves it's existence.
p[4] took c[0]
p[3] took c[3]
p[1] took c[2]
p[4] i.e. Nietzsche dropped c[0] and thinks -> Stop at nothing to get your donut.
p[0] took c[0]
p[4] i.e. Nietzsche dropped c[4] and thinks -> Stop at nothing to get your donut.
p[3] took c[4]
p[1] i.e. Marx dropped c[2] and thinks -> Everybody desires donuts.
p[1] i.e. Marx dropped c[1] and thinks -> Everybody desires donuts.
```



```
p[3] i.e. Hume dropped c[4] and thinks -> Donuts exist because I imagine donuts.
p[4] took c[4]
p[3] i.e. Hume dropped c[3] and thinks -> Donuts exist because I imagine donuts.
p[2] took c[3]
p[0] i.e. Descartes dropped c[1] and thinks -> A donut's hope proves it's existence.
p[0] i.e. Descartes dropped c[0] and thinks -> A donut's hope proves it's existence.
p[4] took c[0]
p[1] took c[1]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[4] i.e. Nietzsche dropped c[0] and thinks -> Stop at nothing to get your donut.
p[0] took c[0]
p[1] took c[2]
p[4] i.e. Nietzsche dropped c[4] and thinks -> Stop at nothing to get your donut.
p[4] took c[4]
p[1] i.e. Marx dropped c[2] and thinks -> Everybody desires donuts.
p[2] took c[2]
p[1] i.e. Marx dropped c[1] and thinks -> Everybody desires donuts.
p[0] took c[1]
p[2] took c[3]
p[0] i.e. Descartes dropped c[1] and thinks -> A donut's hope proves it's existence.
p[1] took c[1]
p[0] i.e. Descartes dropped c[0] and thinks -> A donut's hope proves it's existence.
p[4] took c[0]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[1] took c[2]
p[4] i.e. Nietzsche dropped c[0] and thinks -> Stop at nothing to get your donut.
p[0] took c[0]
p[4] i.e. Nietzsche dropped c[4] and thinks -> Stop at nothing to get your donut.
p[1] i.e. Marx dropped c[2] and thinks -> Everybody desires donuts.
p[2] took c[2]
```

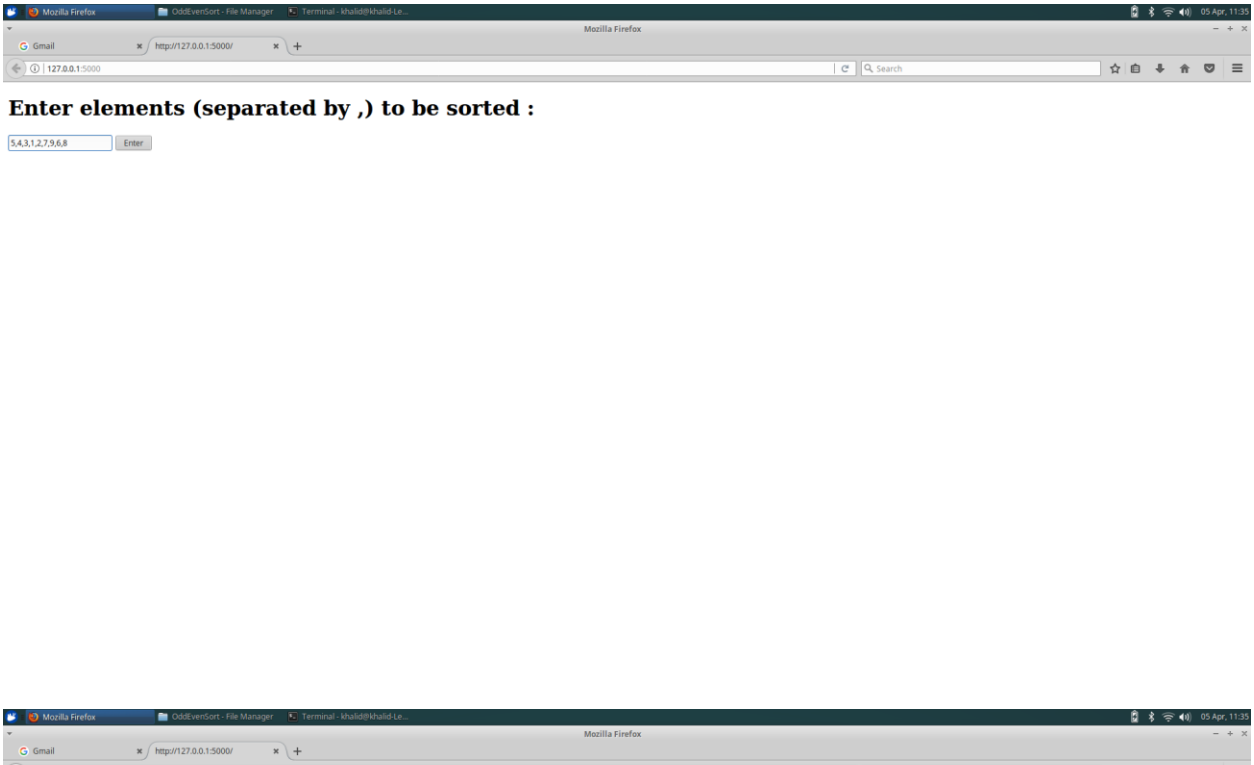


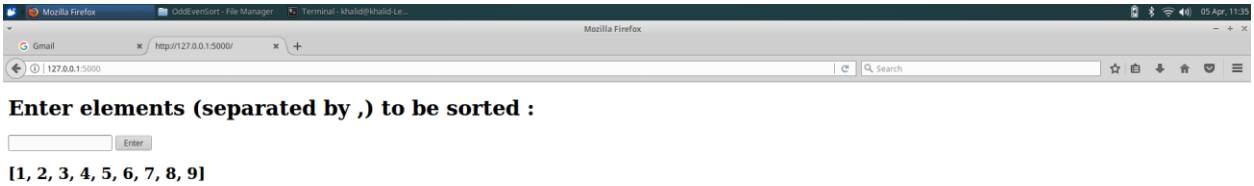
```
p[2] took c[2]
p[1] i.e. Marx dropped c[1] and thinks -> Everybody desires donuts.
p[1] finished thinking and eating
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] took c[2]
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] took c[2]
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] took c[2]
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] took c[2]
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] took c[2]
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] took c[2]
p[2] took c[3]
p[2] i.e. Aristotle dropped c[3] and thinks -> A donut contains it's donut-ness.
p[2] i.e. Aristotle dropped c[2] and thinks -> A donut contains it's donut-ness.
p[2] finished thinking and eating
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ 
```

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop$ python dsaMillerRabin.py

Enter the parameter tuple (p,q,g) :
Enter value for p :
167686
Enter value for q :
89
Enter value for g :
132

Here's how good the DSA tuple is ->
According to brute-force primality testing is q prime ?
True

According to Miller-Rabin primality testing, q is most probably prime ?
True

Is number of bits of q = 160 ?
False

Does q divide (p-1) ?
False

Is number of bits of p between 512 & 1024 ?
False

Is g of the right form i.e. (h^((p-1)/q) mod p) where h = 2 ?
False

khalid@khalid-Lenovo-Z50-70:~/Desktop$
```

OUTPUT:

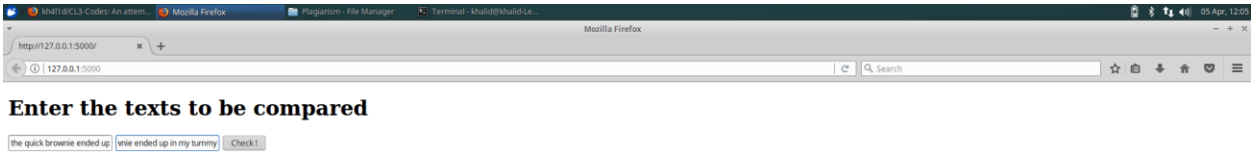

Mozilla Firefox
OddEvenSort - File Manager
Terminal - khalid@khalid-Le...
05 Apr, 11:35
Mozilla Firefox
Gmail
http://127.0.0.1:5000/
127.0.0.1:5000
Search
Enter elements (separated by ,) to be sorted :
5,4,3,1,2,7,9,6,8
Enter

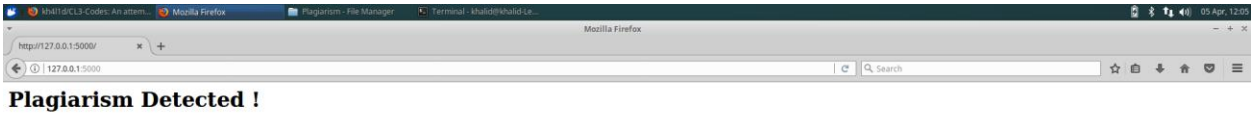

Mozilla Firefox
OddEvenSort - File Manager
Terminal - khalid@khalid-Le...
05 Apr, 11:35
Mozilla Firefox
Gmail
http://127.0.0.1:5000/
127.0.0.1:5000
Search
Enter elements (separated by ,) to be sorted :
Enter
[1, 2, 3, 4, 5, 6, 7, 8, 9]

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ python passwordDataEncryption.py
Enter your password (i.e. key) -
easteregg

Enter your message to be encrypted -
Gotta catch em all !

This is the cipher text generated - which can totally not be cracked ;) -
rNDn6MaSyMjbyMmT2dKSxtPThYI=

This is the decrypted message using your password which is supposed to match your original message -
Gotta catch em all !

khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$
```

OUTPUT:


Mozilla Firefox
http://127.0.0.1:5000/
127.0.0.1:5000
Search
Enter the texts to be compared
the quick brownie ended up
wnie ended up in my tummy
Check !


Mozilla Firefox
http://127.0.0.1:5000/
127.0.0.1:5000
Search
Plagiarism Detected !

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ python pseudoRandomNumberGenerator.py
How many random numbers do you want ?
5

231794730
3274429979
3905459128
850994577
3782040822

khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$
```

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$ python createXMLfile.py
Enter the name of file: items
items.xml file is written & press 1 to see its contents:1
<Numbers>
        <integer num = "645" ></integer>
        <integer num = "715" ></integer>
        <integer num = "172" ></integer>
        <integer num = "518" ></integer>
        <integer num = "387" ></integer>
        <integer num = "465" ></integer>
        <integer num = "442" ></integer>
        <integer num = "458" ></integer>
        <integer num = "86" ></integer>
        <integer num = "58" ></integer>
</Numbers>

press 2 to start quickstart program: 2
[58, 86, 172, 387, 442, 458, 465, 518, 645, 715]
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3$
```

OUTPUT:

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/SHA-1$ python client.py

Enter your password to gain a Kerberos ticket :
tukkupaglu

khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/SHA-1$
```

```
khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/SHA-1$ python server.py

Enter password registered with Kerberos Server :
tukkupaglu

Kerberos ticket granted !

khalid@khalid-Lenovo-Z50-70:~/Desktop/CL3/SHA-1$
```

OUTPUT: