שאלה 1:

Link: https://py3.codeskulptor.org/#user306_83bvlco3d9_0.py

```python
#Question 1
#make a function to detect prime numbers
def IsPrime(n):
        for i in range(2,n):
                #if i is able to be devided
                if n%i==0:
                    return 0
                else:
                    return 1
#function to check how many 'a' is in the string
def IsPrimeString(st):
    #counter to check the 'a'
    counter=0
    for i in st:
        if 'a' in i:
            counter+=1
    #if 'a' is 0 or 1 in the string then return -1
    if counter == 0 or counter ==1:
        return -1
    # if 'a' is prime counter return 1
    if IsPrime(counter):
        return 1
    #else return 0 which means 'a' times is not a prime number
    else:
        return 0
print(IsPrimeString("aaa"))
print(IsPrimeString("fdefdr"))
print(IsPrimeString("AaAaAaAa"))
```

Output

```
1
-1
0
```

"aaa" prime זה זה אז שלושה זה
1- מחזיר אז a אין "fdefdr"
זה 4 a שזה לא prime "AaAaAaAa"
0 מחזיר

Code

```python
1 def MaxLetter(string):
2     # two counters to check most frequent letter
3     counter = 0
4     total_counter = 0
5     #empty string
6     most_frequent_character = ""
7     # check a letter in the string
8     for ch in string:
9         # check another letter in the string
10        for str in string:
11            #if the two letters are equal
12            if str == ch:
13                #add to the counter one
14                #basically we are checking how many letters of
15                # the same are there
16                counter += 1
17        #we are still in the first 'for' so we check for other letters
18        # if the second letter appears more than the first then
19        # this letter is shown more
20        if counter > total_counter:
21            # we make the most frequent letter the main one
22            total_counter = counter
23            # and its place in 'for'
24            most_frequent_character = ch
25        #get the counter back to 0 to check for other possible letters
26        counter = 0
27    return most_frequent_character
28 print(MaxLetter("aaabbc"))
29 print(MaxLetter("bbbcdddddd"))
30 print(MaxLetter("abbacc"))
```

Output

```
a

d

a
```

```
Code
 1 #Question 3
 2 #get the input
 3 str=input("please enter the string")
 4 # Make a function to format the string
 5 def NiceFormat(str):
 6     #using string functions
 7     #first remove all the spaces from
 8     #beginning and end
 9     str=str.strip()
10     #lower all letters
11     str=str.lower()
12     #make the first letter capital
13     str=str.capitalize()
14     return str
15 print(NiceFormat(str))
```

Str=" asDf "

```
Output
Asdf
```

Str=" hi dOctor2"

```
Output
Hi doctor2
```

Str=" bYe m 3lm"

```
Output
Bye m 3lm
```

Code

```
1 #Question 4
2 #get input
3 st1=input("Please enter a string")
4 st2=input("Please enter the second string")
5 #make a function to shuffle the strings
6 def StringShuffle(st1,st2):
7     #make an empty string
8     st3=""
9     #'for' to go over all of st1 because they are equal
10    #doesnt matter which st
11    for i in range(0,len(st1)):
12        #add in order first st1 then st2
13        #after adding a letter from st1 to st3
14        #add a letter from st2 to st3 and so on...
15        st3+=st1[i]
16        st3+=st2[i]
17    return st3
18 print(StringShuffle(st1,st2))
```

St1=Abba
St2=wert

Output

awbebrat

St1=nemer
St2=nseir

Output

nnesmeeirr

St1=hia
St2=bye

Output

hbiyae

Code

```python
1  #Question 5
2  #OPEN A NEW FILE
3  f_write=open("special.txt","w")
4  # make a function to detect special numbers
5  def special_num(x):
6      sum=0
7      # go from 1 to the number
8      for i in range(1,x+1):
9          # if x 'our number from 1 to 10000'
10         # is able to be devided by a number
11         if x%i==0:
12             #then we add the number
13             sum+=i
14     return sum
15 #check from 1 to 10000
16 for x in range(1,10001):
17     #apply the number to the function
18     #and check if its the right
19     if special_num(x)==2*x:
20         #if a number is right then add to the file
21         f_write.write(str(x))
22         f_write.write("\n")
23 #cloes the file
24 f_write.close()
```

📄 special.txt

```
6
28
496
8128
```
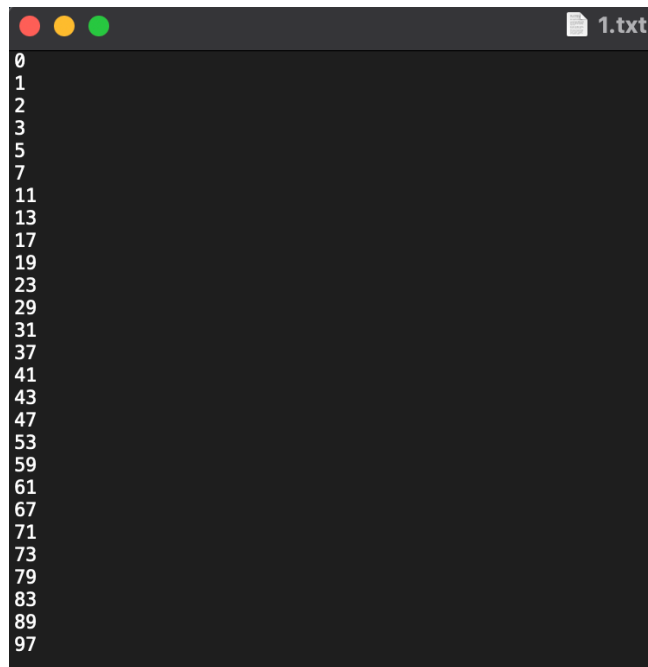
Code

```python
1  #Question 6
2  #function to check whether a number is prime
3  def isprime(n):
4      #start from 2 becuase 0,1 are not
5      i=2
6      #wait until i^2 is n
7      while i*i<=n:
8          #if our number devides by a number
9          #then its not prime
10         if n%i==0:
11             return False
12         #if not keep going
13         i+=1
14     #if its prime last choice
15     return True
16 #make 10 files
17 for i in range(1,11):
18     #make x,y as the question asks
19     #to go from x to y and find the prime numbers
20     x=(i-1)*100
21     y=(i*100-1)
22     #open the file
23     f=open(str(i)+".txt","w")
24     # go from x until y
25     while x!=y:
26         # if the number is prime then put it in the file
27         if isprime(x):
28             f.write(str(x))
29             f.write("\n")
30         x+=1
31 f.close()
```
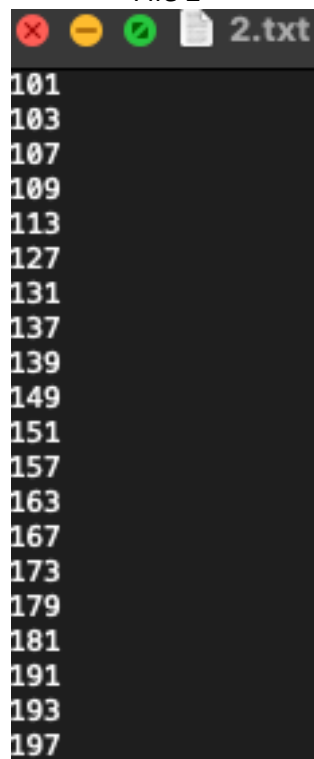
Name
1.txt
2.txt
3.txt
4.txt
5.txt
6.txt
7.txt
8.txt
9.txt
10.txt

למשל 2 קבצים...
File 1

```
0
1
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97
```

File 2

```
101
103
107
109
113
127
131
137
139
149
151
157
163
167
173
179
181
191
193
197
```