1.py

```
def prime(n):
    if n == 1:
        print("1 is neither composite nor prime.")
        return

    for i in range(2,n):
        if n % i == 0:
            print(n, "is not prime.")
            break
    else:
        print(n,"is prime.")

num = int(input("Enter a number: "))
prime(num)
```

2.py

```
def count_chars(s):
    count_vow = 0
    count_upper = 0
    count_lower = 0

    for ch in s:
        if ch in "aeiouAEIOU":
            count_vow += 1
        if ch.islower():
            count_lower +=1
        if ch.isupper():
            count_upper +=1

    print("No. of uppercase characters: ", count_upper)
    print("No. of lowercase characters: ", count_lower)
    print("No. of vowels: ", count_vow)

s = input("Enter a string: ")
count_chars(s)
```

3.py

```
def search(l,s):
    for i in l:
        if s == i:
            print("Found element.")
```

```
            break
    else:
        print("Could not find the element")

l = eval(input("Enter a list with numbers: "))
search_term = int(input("Enter search element: "))
search(l,search_term)
```

4.py

```
def small_large(l):
    small = l[0]
    large = l[0]

    for i in l:
        if small > i:
            small = i
        if large < i:
            large = i
    print("Smallest: ",small)
    print("Largest: ",large)

l = eval(input("Enter a list of numbers: "))
small_large(l)
```

5.py

```
# TODO: Consonants has a bug. It counts spaces too.
def count_text(fname):
    with open(fname) as f:
        content = f.read()
        count_upper = count_lower = count_vow = count_consonants = count_space = 0

        for i in content.strip():

            if i in "aeiouAEIOU":
                count_vow +=1
            else:
                count_consonants +=1
            if i == "\n" or i == " ":
                count_space += 1

            if i.islower():
                count_lower +=1
```

```
            if i.isupper():
                count_upper +=1
        print("No. of uppercase characters: ",count_upper)
        print("No. of lowercase characters: ",count_lower)
        print("No. of vowels: ",count_vow)
        print("No. of consonants: ",count_consonants - count_space)

filename = input("Enter filename: ")
count_text(filename)
```

6.py

```
def copy_files(in_name,out_name):
    infile = open(in_name,"r")
    outfile = open(out_name,"w")

    outfile.write(infile.read())
    print("Successfully copied contents.")
    infile.close()
    outfile.close()

in_name = input("Enter input filename: ")
out_name = input("Enter output filename: ")
copy_files(in_name,out_name)
```

7.py

```
def count_words():
    with open("story.txt") as f:
        contents = f.read()
        words = contents.split()

        print("No. of words in story.txt is:",len(words))

count_words()
```

8.py

```
def print_A():
    with open("story.txt") as f:
        for l in f:
            if l[0] == "A":
                print(l)
print_A()
```

9.py

```
import pickle

def search_emp(search_id):
    with open("emp.dat") as f:
        while True:
            try:

                emp = pickle.load(f)
                if emp["id"] == search_id:
                    print("Id:",emp["id"])
                    print("Name:",emp["name"])
                    print("Salary:",emp["sal"])
            except Exception:
                break

emp_id = int(input("Enter employee id: "))
search_emp(emp_id)
```