1. Display the following menu to the user:
[1] Create a new file.
[2] Display the file.
[3] Add a new item to the file.
Enter 1, 2, or 3:
Ask the user to enter 1, 2 or 3. If they select anything other than 1, 2 or 3 it should display a suitable error message.

If they select 1, ask the user to enter a school subject (For example, CSC1024 Programming Principles, etc.) and save it to a new file called “Subject.txt”. It should overwrite any existing
file with a new file.

If they select 2, display the contents of the “Subject.txt” file.
If they select 3, ask the user to enter a new subject and save it to the file and then display the entire contents of the file.

Run the program several times to test the options.

Flowchart

Start
Print ' [1] Create a new file.'
Print ' [2] Display the file.'
Print ' [3] Add a new item to the file.'
Prompt the user to enter a selection and store it in selection
as an integer

```
print(' [1] Creat a new file.')
print (' [2] Display the file.')
print (' [3] Add a new item to the file.')
selection = int(input('Enter 1,2, or 3: '))
```

Flowchart

If selection is equal to 1:

Prompt the user to enter a subject and store it in subject

Open a file named 'Subject.txt' in write mode and store the file object in file

Write the subject followed by a newline character to the file

Close the file

```
if selection == 1:
    subject = input('Enter a subject: ')
    file = open('Subject.txt', 'w')
    file.write(subject + '\n')
    file.close()
```

Flowchart

Else if selection is equal to 2:

Open the file named 'Subject.txt' in read mode and store the file object in file

Print the contents of the file

Close the file

```
elif selection == 2:
    file = open ('Subject.txt', 'r')
    print(file.read())
    file.close()
```

Flowchart

Else if selection is equal to 3:
    Open the file named 'Subject.txt' in append mode and store the file object in file
    Prompt the user to enter a subject and store it in subject
    Write the subject followed by a newline character to the file
    Close the file

Else:
    Print 'ERROR: Invalid selection!'

End

```
elif selection == 3:
    file = open('Subject.txt', 'a')
    subject = input('Enter a subject: ')
    file.write(subject + '\n')
    file.close()

else:
    print('ERROR: Invalid selection!')
```

```
print(' [1] Creat a new file.')
print (' [2] Display the file.')
print (' [3] Add a new item to the file.')
selection = int(input('Enter 1,2, or 3: '))


if selection == 1:
    subject = input('Enter a subject: ')
    file = open('Subject.txt', 'w')
    file.write(subject + '\n')
    file.close()

elif selection == 2:
    file = open ('Subject.txt', 'r')
    print(file.read())
    file.close()

elif selection == 3:
    file = open('Subject.txt', 'a')
    subject = input('Enter a subject: ')
    file.write(subject + '\n')
    file.close()

else:
    print('ERROR: Invalid selection!')
```

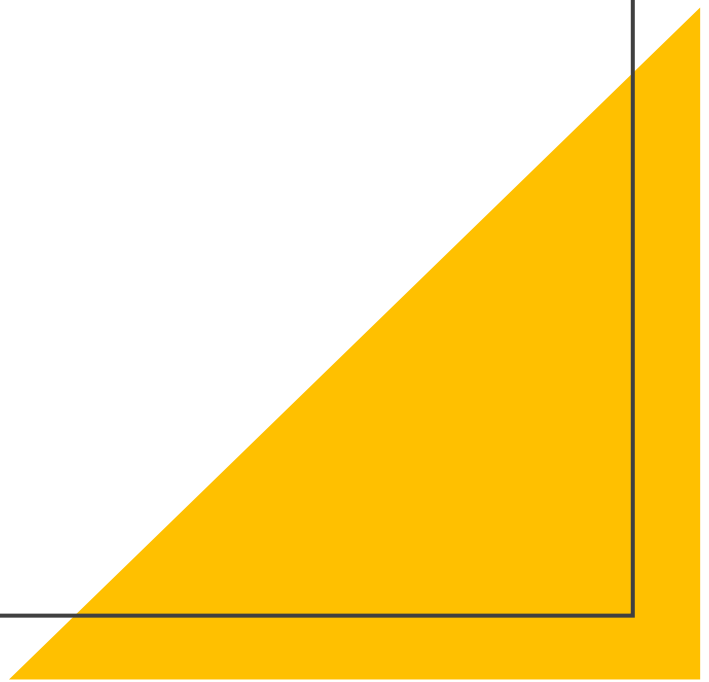
```
>>>
= RESTART: C:\Users\warhlaingn\AppData
 [1] Creat a new file.
 [2] Display the file.
 [3] Add a new item to the file.
Enter 1,2, or 3: 1
Enter a subject: abc
>>>
= RESTART: C:\Users\warhlaingn\AppData
 [1] Creat a new file.
 [2] Display the file.
 [3] Add a new item to the file.
Enter 1,2, or 3: 2
abc

>>>
= RESTART: C:\Users\warhlaingn\AppData
 [1] Creat a new file.
 [2] Display the file.
 [3] Add a new item to the file.
Enter 1,2, or 3: 3
Enter a subject: Ngu
>>>
= RESTART: C:\Users\warhlaingn\AppData
 [1] Creat a new file.
 [2] Display the file.
 [3] Add a new item to the file.
Enter 1,2, or 3: 2
abc
Ngu
```

2. Write a program to ask user what multiplication table the user would like to calculate.

Then, store the output of the multiplication table in a text file (e.g. TT2TXT.txt). Lastly, once the multiplication table program has completed the file writing.

Open the file in read mode and read the text file to display the file contents on the screen.

Example output:
Display multiplication table of? 2
A multiplication table of 2 times 1 to 12.
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
2 x 11 = 22
2 x 12 = 24



Flowchart

Start

Initialize filename variable to "TT2FILE.txt"
Prompt the user to enter a number to display the multiplication table of and store it in num as an integer

```
filename = "TT2FILE.txt"

num = int(input("Display multiplication table of?"))
```

Flowchart

Open the file named filename in write mode and store the file object in file
Write the header for the multiplication table to the file
Loop through numbers from 1 to 12:
    Calculate the product of num and the current number in the loop
    Format the multiplication expression with proper spacing
    Write the formatted multiplication expression to the file
Close the file

```
file = open(filename, "w")
file.write("A multiplication table of " + str (num) + " times 1 to 12." + "\n")
for i in range(1,13):
    write_msg = f'{i:<2} x {num:>2} = {i * num: >3}'
    file.write(write_msg + '\n')
file.close()
```

Flowchart

Open the file named filename in read mode and store the file object in file
Read the contents of the file into the read_msg variable
Print the contents of the file
Close the file

End

```
file = open(filename, 'r')
read_msg = file.read()
print(read_msg)
file.close()
```

```
= RESTART: C:/Users/warhlaingn/AppData/Local/
Display multiplication table of?5
A multiplication table of 5 times 1 to 12.
1  x  5 =   5
2  x  5 =  10
3  x  5 =  15
4  x  5 =  20
5  x  5 =  25
6  x  5 =  30
7  x  5 =  35
8  x  5 =  40
9  x  5 =  45
10 x  5 =  50
11 x  5 =  55
12 x  5 =  60
```

```python
filename = "TT2FILE.txt"

num = int(input("Display multiplication table of?"))

file = open(filename, "w")
file.write("A multiplication table of " + str (num) + " times 1 to 12." + "\n")
for i in range(1,13):
    write_msg = f'{i:<2} x {num:>2} = {i * num: >3}'
    file.write(write_msg + '\n')
file.close()

file = open(filename, 'r')
read_msg = file.read()
print(read_msg)
file.close()
```