

CS111 Homework 12 (from professor Jean Lai)

Name your file **hw12.cpp**

Write a complete C++ program that does the following:

- Write a function that will output 250 random single digit integers into a file named “integer.txt”. Each integer is separated by a newline character.
- Write another function that will read the same file created earlier and save the integers into an array.
- Write a third function to print out the array. (25 integers per line)
- Calculate the sum of the integers and print out the sum.
- Count the number of times each digit appears and output the counts. (Use 1-D array to store the counts)

Sample output:

Array content :

```
3 6 7 5 3 5 6 2 9 1 2 7 0 9 3 6 0 6 2 6 1 8 7 9 2
0 2 3 7 5 9 2 2 8 9 7 3 6 1 2 9 3 1 9 4 7 8 4 5 0
3 6 1 0 6 3 2 0 6 1 5 5 4 7 6 5 6 9 3 7 4 5 2 5 4
7 4 4 3 0 7 8 6 8 8 4 3 1 4 9 2 0 6 8 9 2 6 6 4 9
5 0 4 8 7 1 7 2 7 2 2 6 1 0 6 1 5 9 4 9 0 9 1 7 7
1 1 5 9 7 7 6 7 3 6 5 6 3 9 4 8 1 2 9 3 9 0 8 8 5
0 9 6 3 8 5 6 1 1 5 9 8 4 8 1 0 3 0 4 4 4 4 7 6 3
1 7 5 9 6 2 1 7 8 5 7 4 1 8 5 9 7 5 3 8 8 3 1 8 9
6 4 3 3 3 8 6 0 4 8 8 8 9 7 7 6 4 3 0 3 0 9 2 5 4
0 5 9 4 6 9 2 2 4 7 7 5 4 8 1 2 8 9 3 6 8 0 2 1 0
```

The sum of the array is 1184.

Digit	Count
0	21
1	23
2	22
3	25
4	26
5	23
6	29
7	27
8	26
9	28