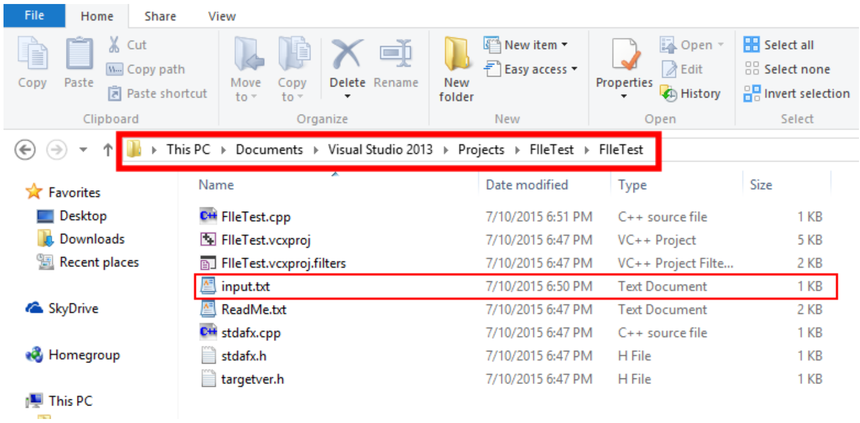
Task 1: Lazy Programmer

When we execute any code we take input from the console. Thus every time we execute a code we have to type the same input again again. It is so painful, if the input size is very large. In this task, we learn how to take input from a file. In the following code snippet we take two numbers as an input from a file named “input.txt”. Then we just print the sum of this 2 numbers.

```
#include<stdio.h>

int main(){
     int a, b, sum;
     FILE *fp;

     fp = fopen("input.txt","r");

     fscanf(fp,"%d",&a);
     fscanf(fp,"%d",&b);

     sum = a+b;
     printf("sum = %d\n",sum);

     fclose(fp);

     return 0;
}
```

To run this code you have to first create a file named “input.txt” in the source folder. See the following figure:



This PC ▸ Documents ▸ Visual Studio 2013 ▸ Projects ▸ FIleTest ▸ FIleTest

Name	Date modified	Type	Size
FIleTest.cpp	7/10/2015 6:51 PM	C++ source file	1 KB
FIleTest.vcxproj	7/10/2015 6:47 PM	VC++ Project	5 KB
FIleTest.vcxproj.filters	7/10/2015 6:47 PM	VC++ Project Filte...	2 KB
input.txt	7/10/2015 6:50 PM	Text Document	1 KB
ReadMe.txt	7/10/2015 6:47 PM	Text Document	2 KB
stdafx.cpp	7/10/2015 6:47 PM	C++ source file	1 KB
stdafx.h	7/10/2015 6:47 PM	H File	1 KB
targetver.h	7/10/2015 6:47 PM	H File	1 KB

1. Now try to compile this code in the IDE and see the output.

Task 1.1 : Hire Killer

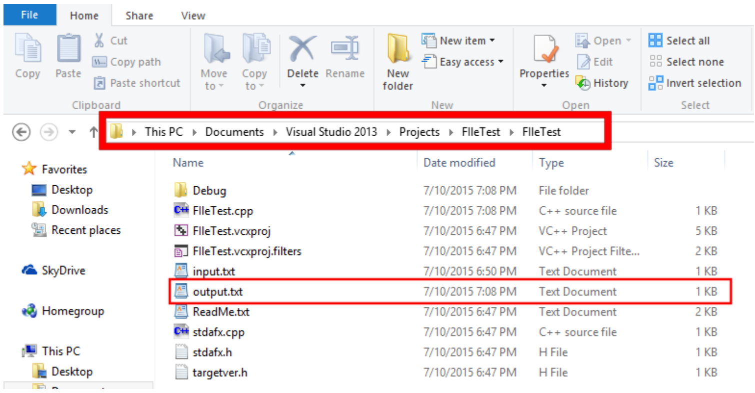
Suppose you are an accountant of an underworld gang. Now the gang leader wants to hire 10 killers. Gang leader give you a file named "killer.txt", which contains the per month salary of each killers. Now gang leader wants you to write a code, which input the salaries of 10 killers from the file and calculate the total salary that the gang need to pay.

Task 2: Super Lazy Programmer!!

Lazy programmer solve the repeated input problem by taking the inputs from a file. Now he wants to write the output of a programmer in file instead of the, so boring, black console window. The following code snippet take two numbers from a file and write the sum of the two number into another file named “output.txt”.

```
#include<stdio.h>

int main(){
     int a, b, sum;
     FILE *fpInput;
     FILE *fpOutput;

     fpInput = fopen("input.txt","r");

     fscanf(fpInput,"%d",&a);
     fscanf(fpInput,"%d",&b);

     fclose(fpInput);

     fpOutput = fopen("output.txt","w");

     sum = a+b;
     fprintf(fpOutput,"sum = %d\n",sum);

     fclose(fpOutput);

     return 0;
}
```

1. Now try to compile this code in the IDE and see the output. Alas!! what happen ? You does not see any output in the console. Don't worry, just go to the source folder, we will see file, named "output.txt". Just open the file you will see output of your program written in that file. Voila!!



This PC › Documents › Visual Studio 2013 › Projects › FIleTest › FIleTest

Name	Date modified	Type	Size
Debug	7/10/2015 7:08 PM	File folder	
FIleTest.cpp	7/10/2015 7:08 PM	C++ source file	1 KB
FIleTest.vcxproj	7/10/2015 6:47 PM	VC++ Project	5 KB
FIleTest.vcxproj.filters	7/10/2015 6:47 PM	VC++ Project Filte...	2 KB
input.txt	7/10/2015 6:50 PM	Text Document	1 KB
output.txt	7/10/2015 7:08 PM	Text Document	1 KB
ReadMe.txt	7/10/2015 6:47 PM	Text Document	2 KB
stdafx.cpp	7/10/2015 6:47 PM	C++ source file	1 KB
stdafx.h	7/10/2015 6:47 PM	H File	1 KB
targetver.h	7/10/2015 6:47 PM	H File	1 KB

Task 2.1 : Expensive Killer

Now you got a file of n killers. This file start with an integer n, denotes the total numbers of killers. After that there are n spaced separate integer, denotes the per month salary of each killers. You just need to identify the most expensive killer.

Task 3 : Save Ghajini

You learn to take input from a file and write output in a file. Just observe carefully, when you open a file in write mode and write something in that file, the previous contents is replaced by the current contents. We can solve the volatility of file by opening a file in "append(a)" mode instead of the "write(w)" mode. Following program open a file in append mode and write a string in that file:

```
#include<stdio.h>

int main(){
     int a, b, sum;
     FILE *fp;

     fp = fopen("output.txt","a");

     fputs(fp, "Hello World!!!!");

     fclose(fp);

     return 0;
}
```

Now run the above program several times and open file "output.txt", see what happen!!!!

Task 3.1 : Ghajini Leader's Assistant

Suppose your gang leader now wants to make his gang a super digital gang. Each time he speak something, you have take note and write this in a file.

1. Write a program which takes input from the console until you type "END". Each time you enter a text, you have to write this in a file. Tips: simply write a infinite loop which take a string from the

console and compare whether the input string is ”END”. If the input string is ”END” then break the loop. Otherwise, just open the file in ”append(a)” mode and write the string using fputs or fprints.

2. Simply modify the code of the above problem and write a function addNote(char note[]) to add text in a file. Each time when you take a line from the console just call the function. addNote function just need to open the file in ”append(a)” mode and append the contents.

Practice At Home

1. Read a text file and print the frequency of each characters.
2. Learn fgets for taking a string as a input from a file.
3. Learn fputs to write a string in a file.
4. Try to input details(ID, name, age, cgpa) of 10 students from a file. Tips: use delimiter to seperate the details of one student from the another student.
5. Try to write the details of 10 students in file using a program. Write use another program to read the student details again.
6. Learn, how to flush the file buffer. Tips: we can flush the file buffer like we flush the stdin. Just write fflush(fp) when you flash any file buffer.
7. Learn the details of file pointer