As per the assignment , I have created multiple test cases , which are kept inside **tests** folder.

- The input files are having **.in** extension . e.g. sample1.in
- The output files having **.out** extension . e.g. sample1.out
- For **test case 1** , the input file is **sample1.in** and expected output file is **sample1.out .**

- All the **.cpp** files are kept in the **src** folder.
- All the **.h** files are kept in the **include** folder.
- All the library files are kept in the **lib** folder.
- All the test files are kept in the **tests** folder.
- The final Executable file is kept in the **bin** folder.
- All temporary files generated during program execution are kept in the **objs** folder.
- All log files are kept in the **logg** folder.
- For automatic build , we have a makefile named **Makefile.**

Codes In Makefile :

➔ With **build** option , makefile will create the executable named **ans.**
➔ With the **libs** option , makefile will create the library files named **libmatrixops.so , libscalarops.a , libadditional.a**
➔ With the **prepare** option , makefile will create a temporary file , which contains the path to the input and expected output file .. This temporary file will further be used by **run** option. i.e. **temp.txt.**
➔ With the **run** option , makefile will run the executable which will take input from the file mentioned in the prepare stage . and compare its output with the expected output file , and say if both the output matches or not .
➔ After **run,** all the temporary files will be deleted . i.e. **temp.txt , temp.out**
➔ The **tests** option runs all the test cases at a time.
➔ The **test1 ,test2** etc options runs only specific testcase . Like test1 will run testcase 1 with input as sample1.in and expected output file as sample1.out .
➔ The **clean** option cleans all the files except the makefile, sourcefiles , header files and test cases files . Except **src/ , include/, tests/, Makefile** all other files will be deleted by make clean option.
➔ If **run** option is invoked without a immediate **prepare** option, it will create **bin/run.in** and **bin/run.out .** And perform run operation .

For output please run the makefile .