**DAY 05 (28-10-2024)**

* **Compiling the code without using make command**

Mkdir mainprj

Cd mainprj

Mainprj>mkdir inc obj

Created header file

Cd inc

Mainprj/inc/>vi calc.h

cd../

cd src

mainprj/src/> vi calc.c

mainprj/src/> vi main.c

cd ../

mainprj/>gcc -c ./src/calc.c -I./inc/ -o ./obj/calc.o

mainprj/>gcc -c ./src/main.c -I./inc/ -o ./obj/main.o

* **Errors**
* **implicit declaration:**this error occurs when we used the interface, but interface not declared.
* **Segmentation fault** (core dumped): trying to assess address beyond the scope.
* **Stack smashing detected:**
* **Exited normally:**
* Invalid use of void expression – it is difficult for a void pointer to dereference so we explicitly typecast it
* Double free detected (aborted (core dumped)) –

* To copy files/directories from one repository to another repository
* First clone to the repository from which files are to be copied (sir’s github repository: -git clone <https://github.com/bhimatak/CGBatch17Oct2024.git)>

* **Make file:** It will search/fetch for only source files which are latest modified and compiles accordingly.
* To create makefile : - vi Makefile --- to create makefile
* Make -f ./scripts/Makefile --- to run a makefile written in the shell language

* **Code coverage tool (gcov)**: we get to know the no.of lines executed in a given code
* To check the coverage of the program lines:
* gcc -fprofile-arcs -ftest-coverage file1.c file2.c …….
* After compiling  above command we get file.*gcno (this file contains binary data)*
* After executing (./a.out) we get file.gcda (it is again a binary file)
* gcov file.c ---- to get the percentage of the code executed and is useful in unit test case

* **git hub:**
* Create and clone the github repository, git clone https:….  --- command to clone the repository
* Create a directory using repository in command prompt
* git add . --- to add all the edited files into the local repository, git add filename --- to add specified file into the local repository.
* git commit -m “  “ --- to pass a message and commit the changes
* git push origin main ---  to push the local added files to the github

* **splint**: it does static analysis of source code. To check memory leakages
* check for bugs