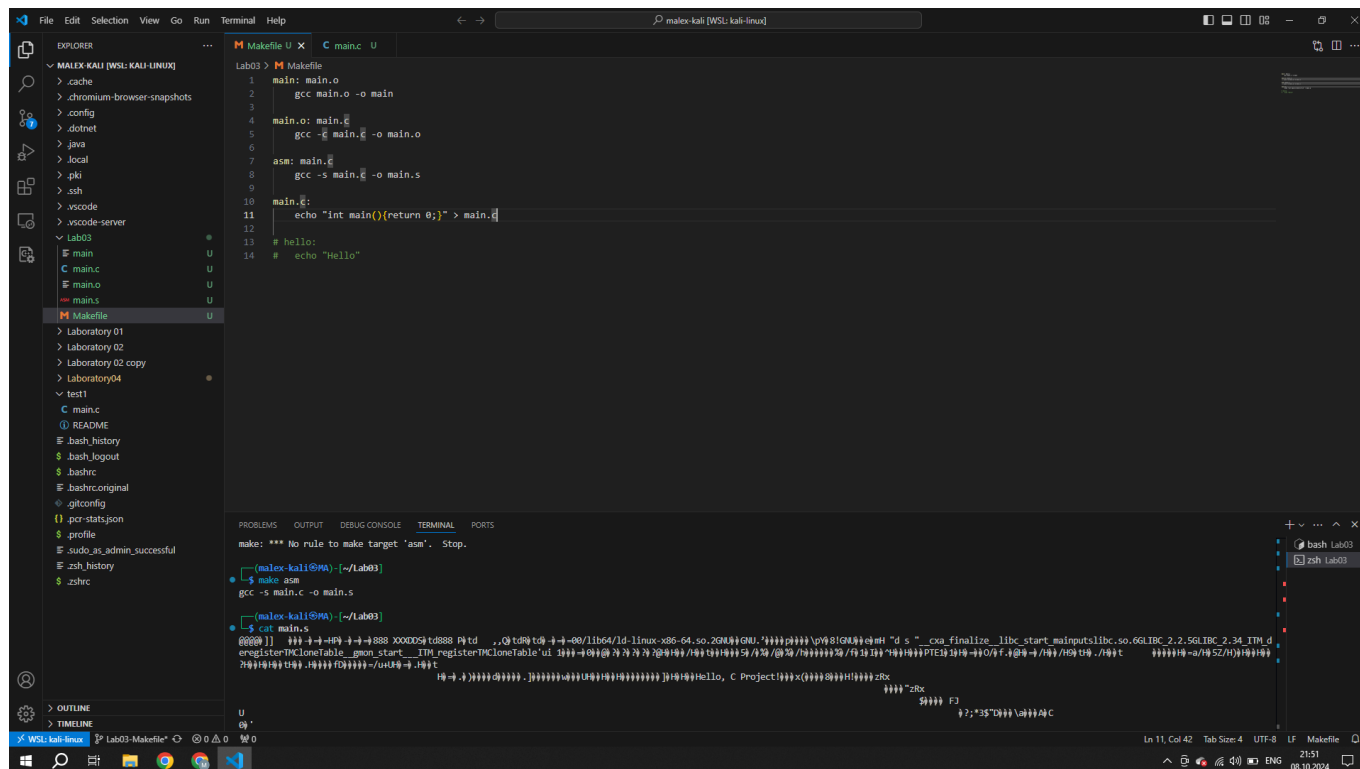


Report 3

Firstly I have cloned a project from Github, created new branch and created Makefile



The screenshot shows a VS Code editor with a file explorer on the left, a Makefile in the center, and a terminal at the bottom. The Makefile contains the following content:

```
1 main: main.o
2 gcc main.o -o main
3
4 main.o: main.c
5 gcc -c main.c -o main.o
6
7 asm: main.c
8 gcc -s main.c -o main.s
9
10 main.c:
11 echo "int main(){return 0;}" > main.c
12
13 # hello:
14 # echo "Hello"
```

The terminal output shows the following commands and results:

```
make: *** no rule to make target 'asm'. Stop.
$ make asm
gcc -s main.c -o main.s
$ cat main.s
.intel_syntax noprefix
.text
.globl _main
.type _main, @function
_main:
    push    rbp
    mov     rbp, rdi
    mov     rax, 0
    ret
$ ./main
Hello, C Project
```

```
git clone git@github.com:MalexSw/Lab03.git
cd /home/malex-kali/Lab03
git checkout main
git checkout
git checkout -b Lab03-Makefile
make -v
cd /home/malex-kali/Lab03
touch Makefile
```

Then I created some functions with name "main" and tried command "echo"

```
main: main.o
gcc main.o -o main

main.o: main.c
gcc -c main.c -o main.o

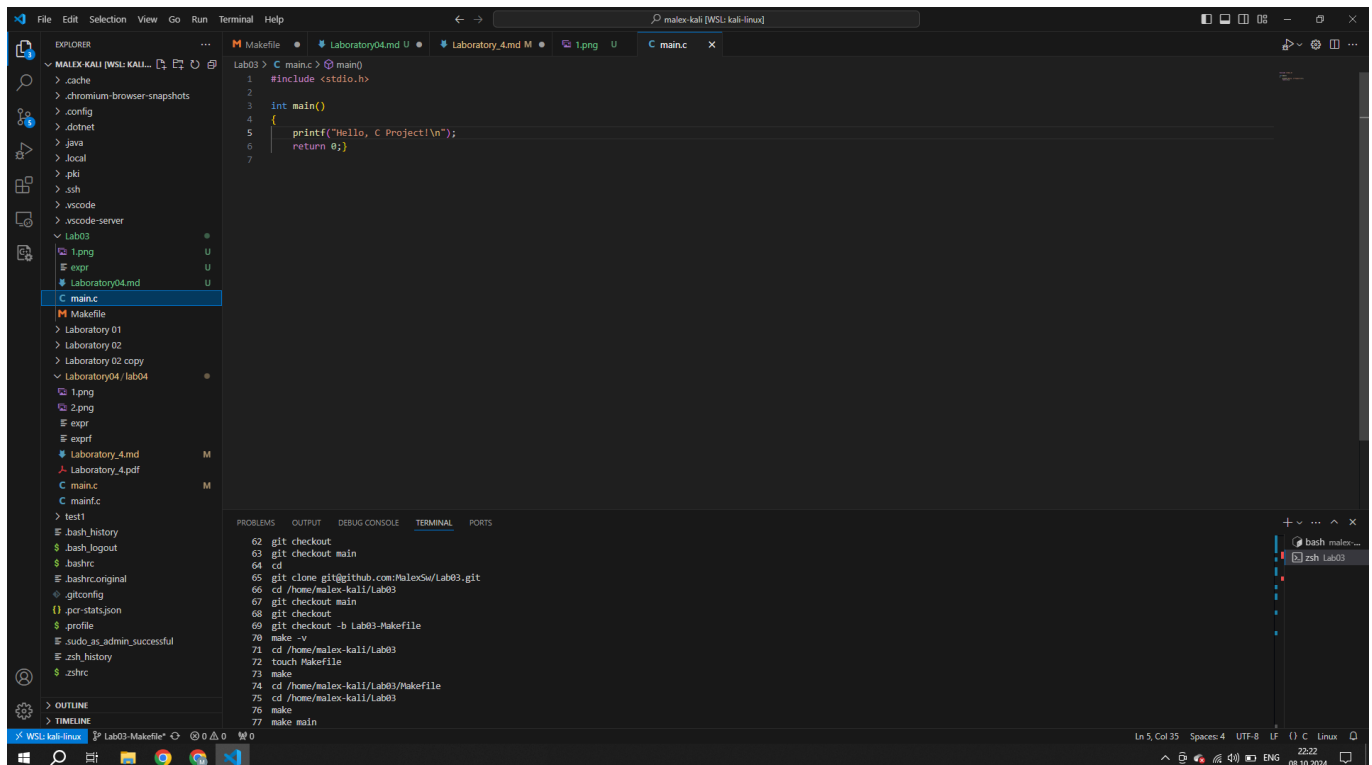
asm: main.c
gcc -s main.c -o main.s

main.c:
echo "int main(){return 0;}" > main.c
```

```
clean:
rm -f *.o *.s main

#hello:
#echo "Hello"
```

After this I have created file "main.c" and created some code there



And debugged it with gdb

```
(malex-kali@MA)-[~/Lab03]
└─$ gcc -g -O0 main.c -o expr

(malex-kali@MA)-[~/Lab03]
└─$ gdb ./expr
GNU gdb (Debian 13.2-1+b2) 13.2
Copyright (C) 2023 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later http://gnu.org/licenses/gpl.html
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Type "show copying" and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
https://www.gnu.org/software/gdb/bugs/.
Find the GDB manual and other documentation resources online at:
http://www.gnu.org/software/gdb/documentation/.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
```

```
--Type for more, q to quit, c to continue without paging--c
Reading symbols from ./expr...
(gdb) r
Starting program: /home/malex-kali/Lab03/expr
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Hello, C Project!
[Inferior 1 (process 13108) exited normally]
(gdb) q
```

And, finally, I have created cleaned trashed and uploaded files into github

```
└─(malex-kali@MA)-[~/Lab03]
└─$ make clean
rm -f *.o *.s main
```

```
(malex-kali@MA)-[~/Lab03]
└─$ git status
On branch Lab03-Makefile

No commits yet

Untracked files:
(use "git add ..." to include in what will be committed)
Makefile
main.c

nothing added to commit but untracked files present (use "git add" to track)
```

```
└─(malex-kali@MA)-[~/Lab03]
└─$ git add Makefile
```

```
└─(malex-kali@MA)-[~/Lab03]
└─$ git add main.c
```

```
└─(malex-kali@MA)-[~/Lab03]
└─$ git commit -m "Added new Makefile"

[Lab03-Makefile (root-commit) 85f9991] Added new Makefile
2 files changed, 23 insertions(+)
create mode 100644 Makefile
create mode 100644 main.c

└─(malex-kali@MA)-[~/Lab03]
└─$ git push
fatal: The current branch Lab03-Makefile has no upstream branch.
To push the current branch and set the remote as upstream, use

git push --set-upstream origin Lab03-Makefile
```

To have this happen automatically for branches without a tracking upstream, see 'push.autoSetupRemote' in 'git help config'.

```
└─(malex-kali@MA)-[~/Lab03]
└─$ git push --set-upstream origin Lab03-Makefile
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 20 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 460 bytes | 230.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:MalexSw/Lab03.git

• [new branch] Lab03-Makefile -> Lab03-Makefile
  branch 'Lab03-Makefile' set up to track 'origin/Lab03-Makefile'.
```

Problems: I haven't used part of code for x86 and x86_64