

## به نام خدا

اعضای گروه : صدرا صالحی کردآبادی – امیر کوچکی – ابراهیم گلریز – آرتان رحیم زاده

### جواب سوال 1 :

برای کامپایل کردن یک کد نوشته شده به زبان C ابتدا باید یکی از کامپایلر های زبان C را نصب کنیم.  
برای انجام این تمرین ما کامپایلر gcc را انتخاب میکنیم. اکنون باید کامپایلر gcc را به کمک دستور  
sudo apt install gcc نصب کنیم :

```
sadram@IDEAL:/mnt/c:/Users/ikwin_04bit/Desktop$ sudo apt install gcc
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  gcc-11 libasan6 libatomic1 libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev libgcc-11-dev libgd3 libgomp1 libitm1 liblsan0 libnsl-dev libquadmath0
  libtirpc-dev libubsan0 linux-libc-dev manpages-dev rpcsvc-proto
Suggested packages:
  gcc-multilib make autoconf automake libtool flex bison gdb gcc-doc gcc-11-multilib gcc-11-doc gcc-11-locales glibc-doc libgd-tools
The following NEW packages will be installed:
  gcc gcc-11 libasan6 libatomic1 libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev libgcc-11-dev libgd3 libgomp1 libitm1 liblsan0 libnsl-dev libquadmath0
  libtirpc-dev libubsan0 linux-libc-dev manpages-dev rpcsvc-proto
0 upgraded, 22 newly installed, 0 to remove and 49 not upgraded.
Need to get 1323 kB/35.9 MB of archives.
After this operation, 117 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 linux-libc-dev amd64 5.15.0-71.78 [1323 kB]
Fetched 1323 kB in 15s (87.1 kB/s)
Selecting previously unselected package libcc1-0:amd64.
(Reading database ... 39988 files and directories currently installed.)
Preparing to unpack .../00-libcc1-0_12.1.0-2ubuntu1~22.04_amd64.deb ...
Unpacking libcc1-0:amd64 (12.1.0-2ubuntu1~22.04) ...
Selecting previously unselected package libgomp1:amd64.
Preparing to unpack .../01-libgomp1_12.1.0-2ubuntu1~22.04_amd64.deb ...
Unpacking libgomp1:amd64 (12.1.0-2ubuntu1~22.04) ...
Selecting previously unselected package libitm1:amd64.
Preparing to unpack .../02-libitm1_12.1.0-2ubuntu1~22.04_amd64.deb ...
Unpacking libitm1:amd64 (12.1.0-2ubuntu1~22.04) ...
Selecting previously unselected package libatomic1:amd64.
Preparing to unpack .../03-libatomic1_12.1.0-2ubuntu1~22.04_amd64.deb ...
Unpacking libatomic1:amd64 (12.1.0-2ubuntu1~22.04) ...
Selecting previously unselected package libasan6:amd64.
Preparing to unpack .../04-libasan6_11.3.0-1ubuntu1~22.04_amd64.deb ...
Unpacking libasan6:amd64 (11.3.0-1ubuntu1~22.04) ...
Selecting previously unselected package liblsan0:amd64.
Preparing to unpack .../05-liblsan0_12.1.0-2ubuntu1~22.04_amd64.deb ...
Unpacking liblsan0:amd64 (12.1.0-2ubuntu1~22.04) ...
Selecting previously unselected package libubsan0:amd64.
Preparing to unpack .../06-libubsan0_11.3.0-1ubuntu1~22.04_amd64.deb ...
Unpacking libubsan0:amd64 (11.3.0-1ubuntu1~22.04) ...
Selecting previously unselected package libubsan1:amd64.
Preparing to unpack .../07-libubsan1_12.1.0-2ubuntu1~22.04_amd64.deb ...
Unpacking libubsan1:amd64 (12.1.0-2ubuntu1~22.04) ...
Selecting previously unselected package libquadmath0:amd64.
```

سپس یک فایل با نام tempCode.c ایجاد می کنیم و سپس یک کد ساده به زبان C در آن مینویسیم و  
سپس آن را به کمک دستور gcc -o compiledFile tempCode.c کامپایل میکنیم و سپس فایل  
خروجی را که نام آن compiledFile است اجرا میکنیم :

```
sadra@IDEAL:/mnt/c/Users/iWin_64bit/desktop$ touch tempCode.c
sadra@IDEAL:/mnt/c/Users/iWin_64bit/desktop$ echo '#include<stdio.h>
int main()
{
> int main(){
> printf("Hello world\n");
> return 0;
> }' > tempCode.c
sadra@IDEAL:/mnt/c/Users/iWin_64bit/desktop$ cat tempCode.c
#include<stdio.h>

int main(){
printf("Hello world\n");
return 0;
}
sadra@IDEAL:/mnt/c/Users/iWin_64bit/desktop$ gcc -o compiledFile tempCode.c
sadra@IDEAL:/mnt/c/Users/iWin_64bit/desktop$ ./compiledFile
Hello world
sadra@IDEAL:/mnt/c/Users/iWin_64bit/desktop$
```