CPSC 240: Computer Organization and Assembly Language
Assignment 01, Fall Semester 2023

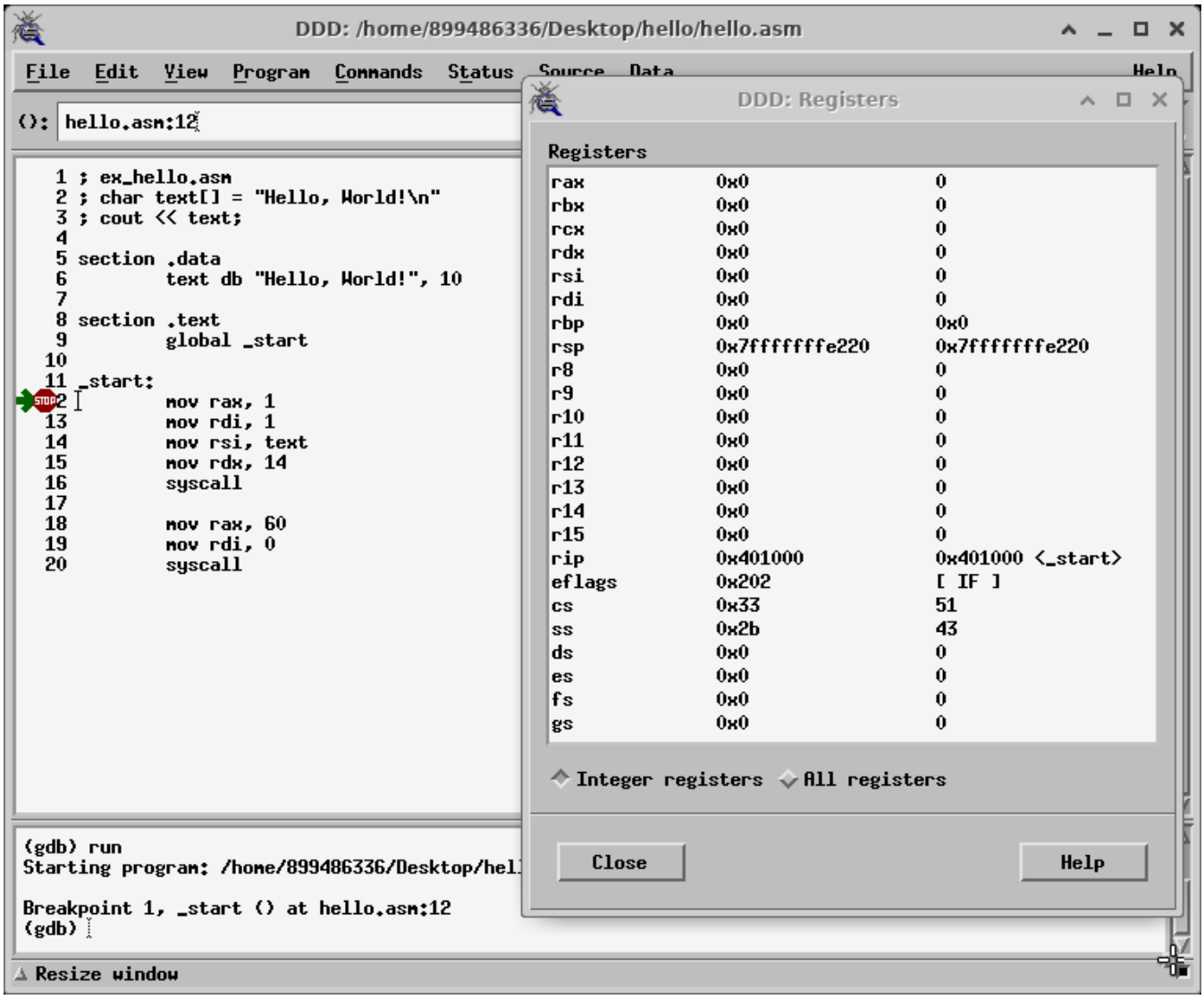
CWID:_____ Name:_____

1. Download the “CPSC-240 Assignment01.docx” document.
2. Follow the “CPSC-240 Ex01 Hello World.pdf” slide to design a “hello.asm” Assembly program and generate. “hello.o”, “hello.lst”, and “hello” files.
3. Copy and paste the “hello.asm” file into the document.
4. Follow the “CPSC-240 Ex01 Debugger.pdf” slide to debug the “hello” file.
5. When the program runs to line 12, copy and paste the "Register" window into the document.
6. When the program runs to line 18, copy and paste the "Register" window into the document.
7. When running the "x/14db &text" and "x/s &text" commands, copy and paste the "DDD" window (including the gdb panel) into the document to display the memory results.
8. Save the file in pdf format and submit the pdf file to Canvas before deadline.
9. Deadline is 23:59 pm on 09/06/2023.

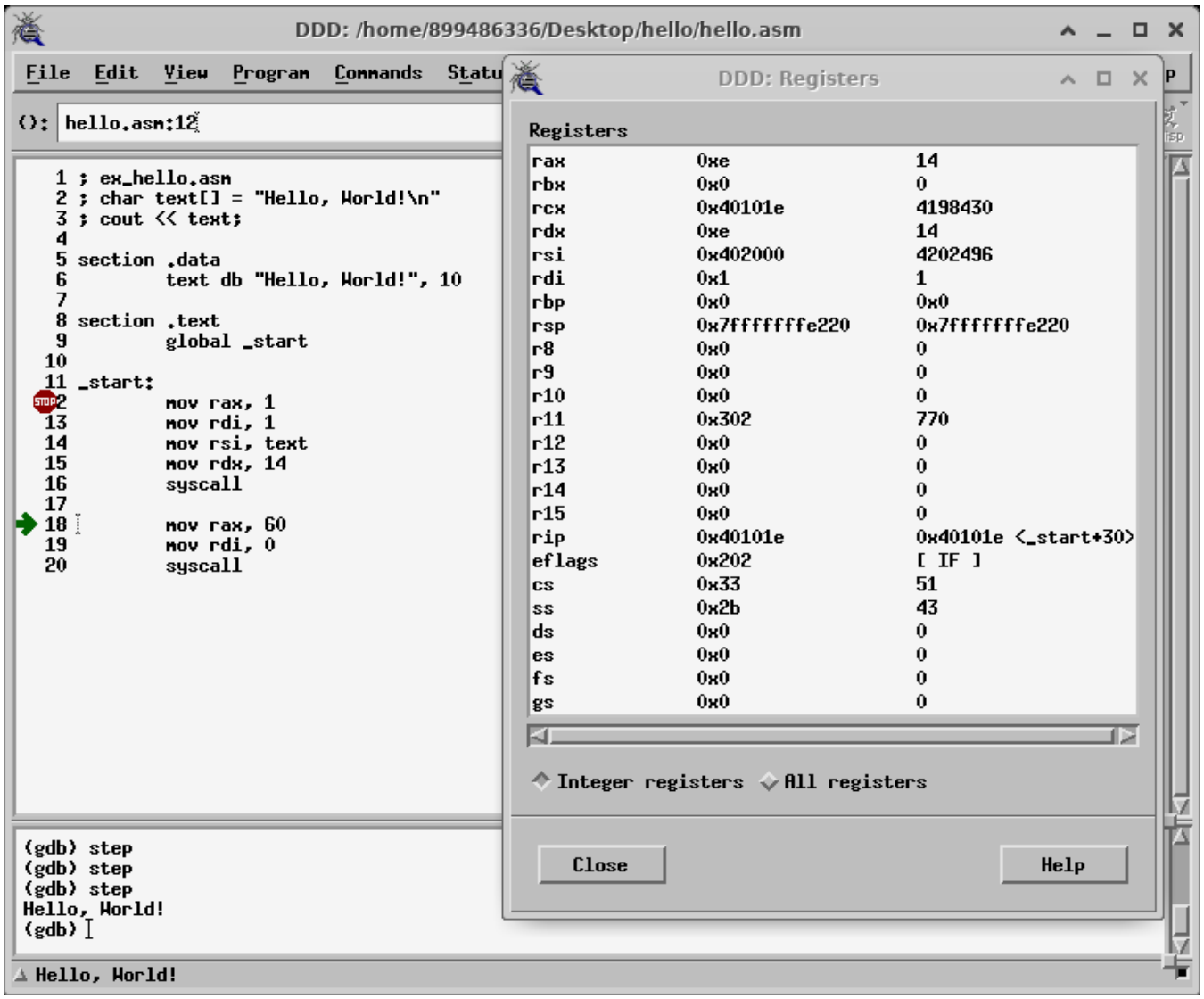
[Insert hello.asm file here]

```
; ex_hello.asm
; char text[] = "Hello, World!\n"
; cout << text;

section .data
 text db "Hello, World!", 10

section .text
 global _start

_start:
 mov rax, 1
 mov rdi, 1
 mov rsi, text
 mov rdx, 14
 syscall

 mov rax, 60
 mov rdi, 0
 syscall
```

[Insert 1st Register window here]



[Insert 2nd Register window here]



[Insert DDD window here]

```
(gdb) step
(gdb) step
Hello, World!
(gdb) x/14db &text
0x402000:       72      101     108     108     111     44      32      87
0x402008:       111     114     108     100     33      10
(gdb) x/s &text
0x402000:       "Hello, World!\n"
(gdb)
```