CPSC 240: Computer Organization and Assembly Language
Assignment 01, Fall Semester 2024

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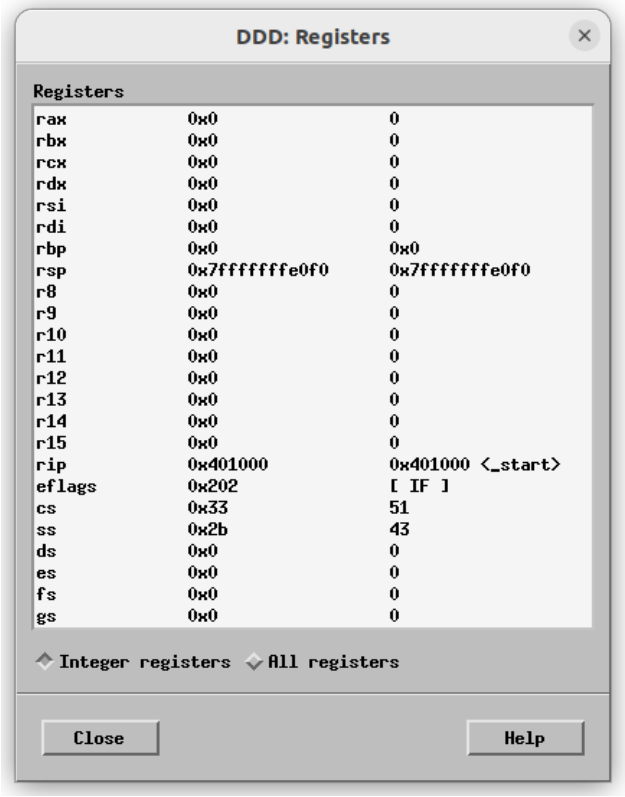
1. Download the “CPSC-240 Assignment01.docx” document.
2. Follow the “CPSC-240 Ex01 Hello World.pdf” slide to design a “hello.asm” Assembly program and generate. “hello.o”, “hello.lst”, and “hello” files.
3. Copy and paste the “hello.asm” source code into the document.
4. Follow the “CPSC-240 Ex01 Debugger.pdf” slide to debug the “hello” file.
5. When the program runs to line 15, copy and paste the "Register" window into the document.
6. When the program runs to line 21, 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 "GDB" 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.

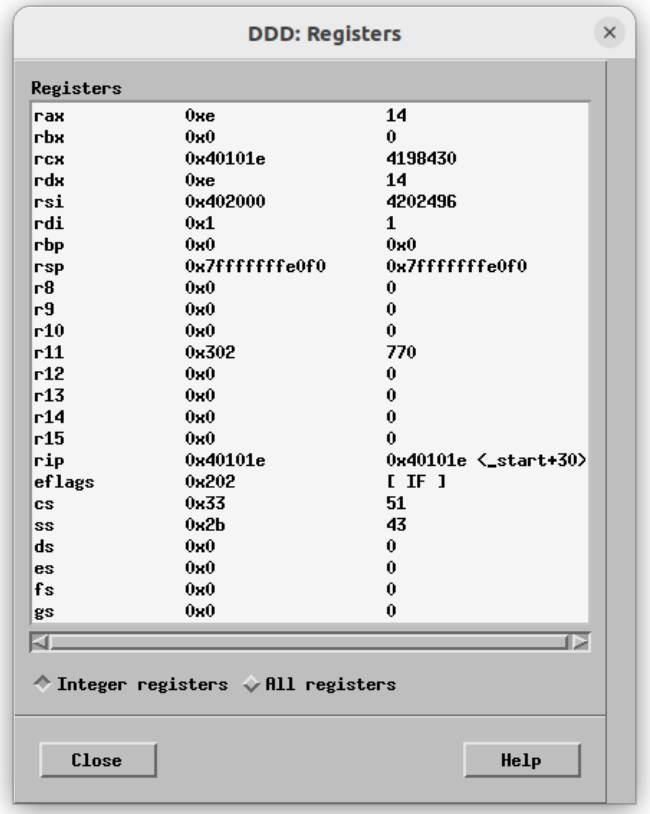
[Insert hello.asm source code]

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

section .data
LF          equ  10
NULL            equ  0
SYS_exit   equ  60
EXIT_SUCCESS     equ  0
text          db    "Hello, World!", LF, NULL

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

  mov rax, SYS_exit
  mov rdi, EXIT_SUCCESS
  syscall
```

[Insert 1st Register window to display initial values]



[Insert 2nd Register window here simulated values]



[Insert GDB window to display the variables]