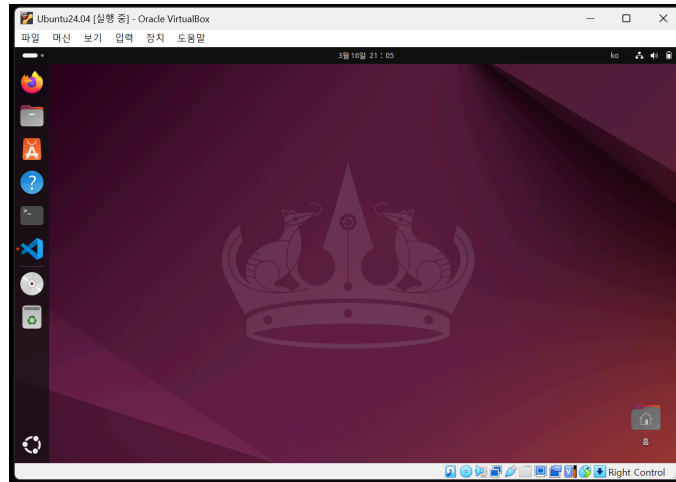


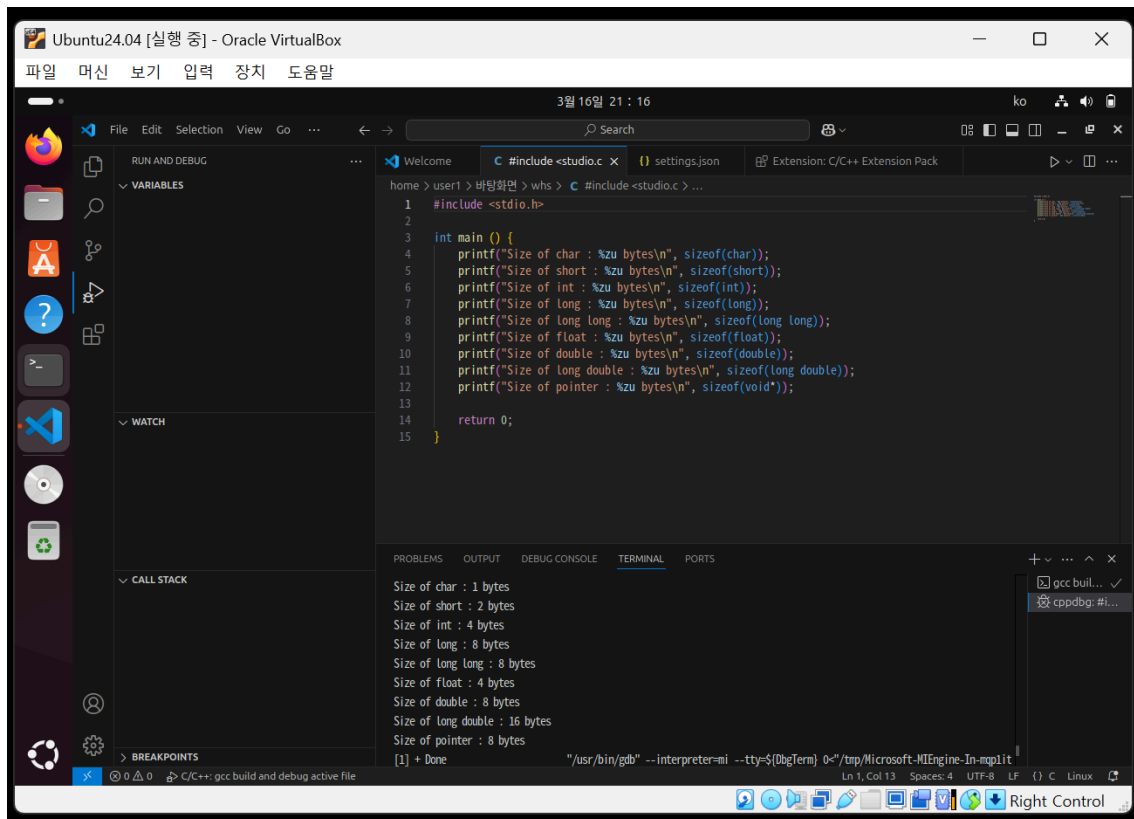


[WHS 3기 컴퓨터구조1] 김신아 (9502)

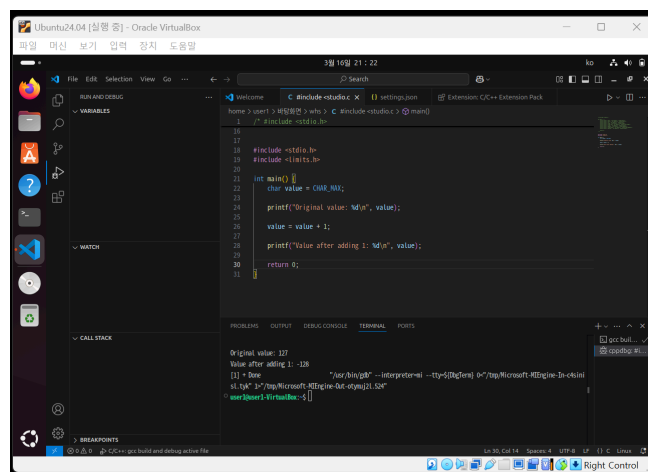


우분투 code를 통해 실습 진행하였습니다.

- 수업 자료 ppt를 참고하며 작성 진행하였습니다.

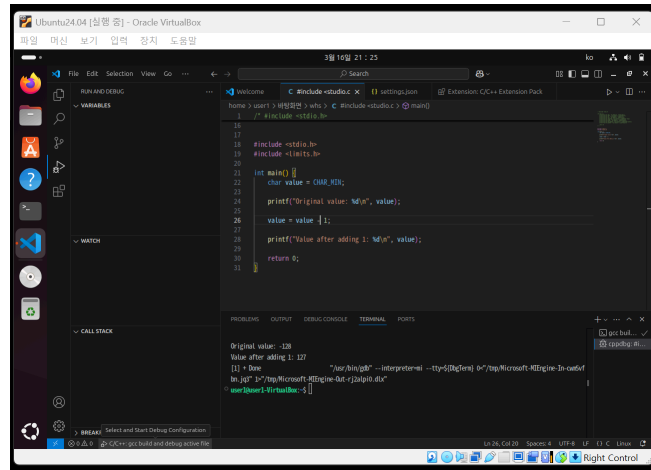


Sizeof 연산 코드 작성



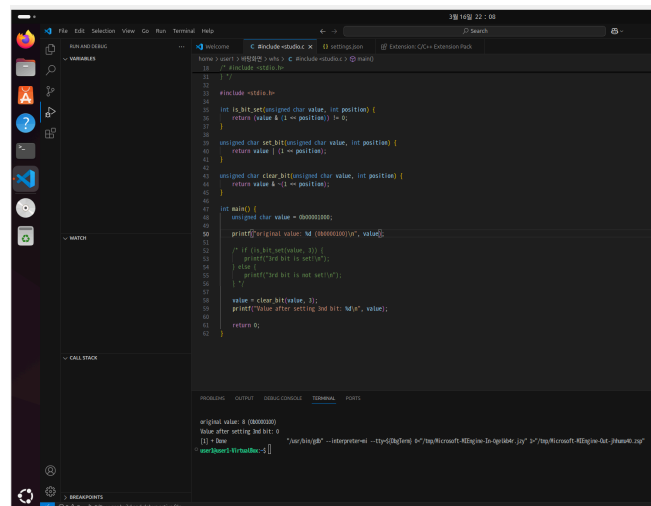
오버플로 코드 작성

- 오버플로 결과 값 도출



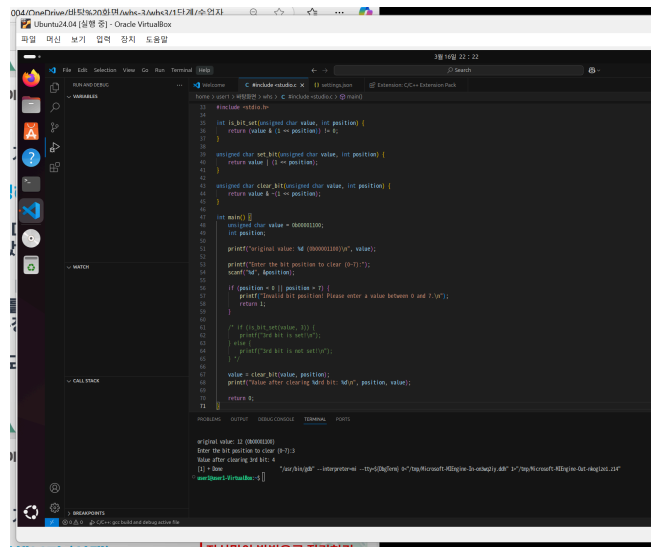
언더플로 변경하여 코드 작성

- CHAR_MAX를 CHAR_MIN으로 변경하기
- +1을 -1로 변경하여 작성
- 언더플로 값 확인하기

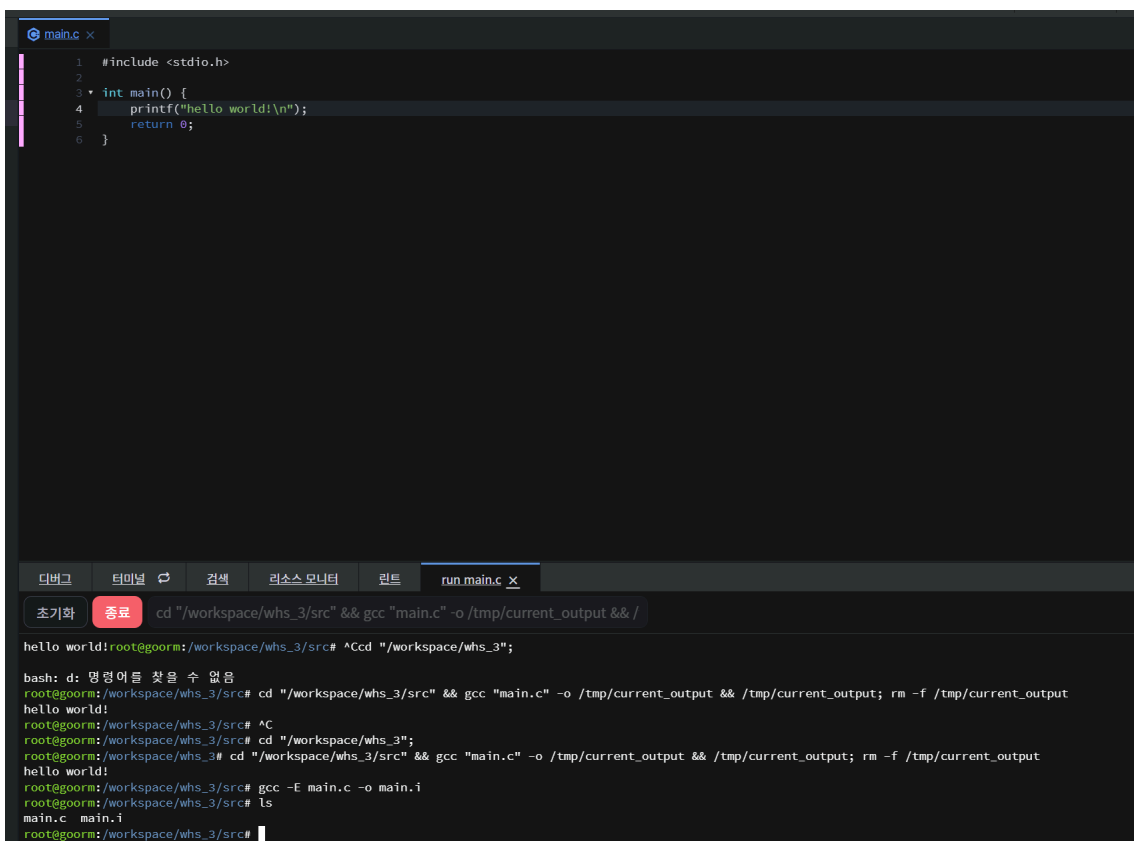


비트 연산 프로그램 작성 후 끄기 함수 구현

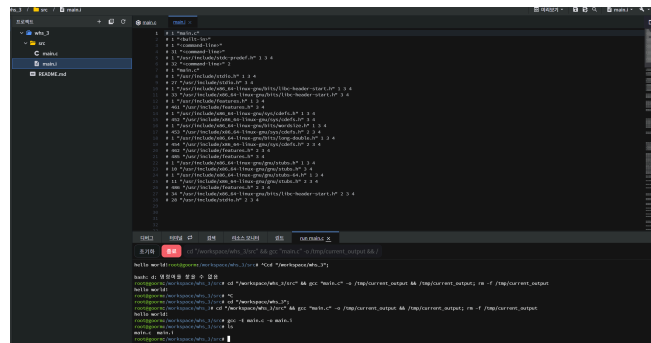
- unsigned char clear_bit(unsigned char value, int position) {
return value & ~(1 << position);
}



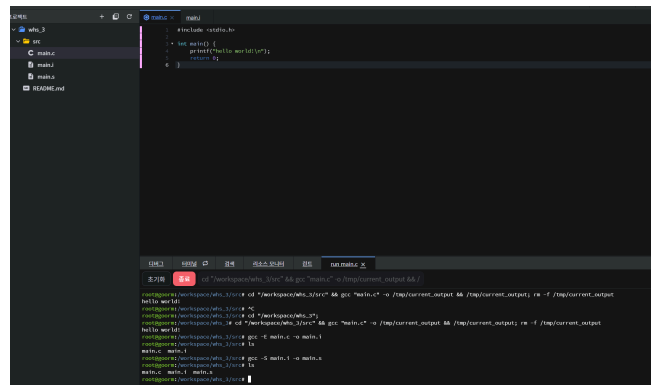
사용자 입력을 받도록 수정



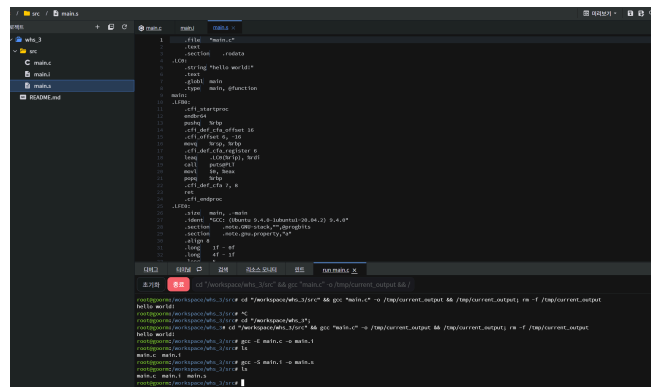
전처리 과정 .i 파일 확인하기



전처리 과정 .i 파일 확인하기2



컴파일 과정 .s 파일 확인하기



컴파일 과정 .s 파일 확인하기2

```

1  .file "main.c"
2  .text
3  .section .rodata
4  .LC0:
5  .string "hello world:"
6  .text
7  .globl main
8  .type main, @function
9  main:
10 .LFB0:
11 .cfi_startproc
12     endbr64
13     pushq %rbp
14     .cfi_def_cfa_offset 16
15     .cfi_offset 6, -16
16     movq %rsp, %rbp
17     .cfi_def_cfa_register 6
18     leaq .LC0(%rip), %rdi
19     call puts@PLT
20     movl $9, %eax
21     popq %rbp
22     .cfi_def_cfa 7, 8
23     ret
24 .LFE0:
25 .size main, -main
26 .ident "GCC: (Ubuntu 9.4.0-1ubuntu1~20.04.2) 9.4.0"
27 .section .note.GNU-stack,"",@progbits
28 .section .note.gnu.property,"a"
29 .align 8
30 .long 1f - 0f
31 .long 4f - 1f
32 .long 5
33

```

```

root@goorm: /workspace/whs_3/src# cd "/workspace/whs_3/" && gcc "main.c" -o /tmp/current_output && /
root@goorm: /workspace/whs_3/src# cd "/workspace/whs_3/" && gcc "main.c" -o /tmp/current_output && /tmp/current_output; rm -f /tmp/current_output
hello world!
root@goorm: /workspace/whs_3/src# gcc -E main.c -o main.i
root@goorm: /workspace/whs_3/src# ls
main.c  main.i  main.s
root@goorm: /workspace/whs_3/src# gcc -S main.i -o main.s
root@goorm: /workspace/whs_3/src# ls
main.c  main.i  main.s
root@goorm: /workspace/whs_3/src# gcc -C main.s -o main.o
root@goorm: /workspace/whs_3/src# ls
main.c  main.i  main.o  main.s
root@goorm: /workspace/whs_3/src#

```

gcc컴파일러 어셈블 과정 .o파일 확인하기

```

1  .file "main.c"
2  .text
3  .section .rodata
4  .LC0:
5  .string "hello world:"
6  .text
7  .globl main
8  .type main, @function
9  main:
10 .LFB0:
11 .cfi_startproc
12     endbr64
13     pushq %rbp
14     .cfi_def_cfa_offset 16
15     .cfi_offset 6, -16
16     movq %rsp, %rbp
17     .cfi_def_cfa_register 6
18     leaq .LC0(%rip), %rdi
19     call puts@PLT
20     movl $9, %eax
21     popq %rbp
22     .cfi_def_cfa 7, 8
23     ret
24 .LFE0:
25 .size main, -main
26 .ident "GCC: (Ubuntu 9.4.0-1ubuntu1~20.04.2) 9.4.0"
27 .section .note.GNU-stack,"",@progbits
28 .section .note.gnu.property,"a"
29 .align 8
30 .long 1f - 0f
31 .long 4f - 1f
32 .long 5
33

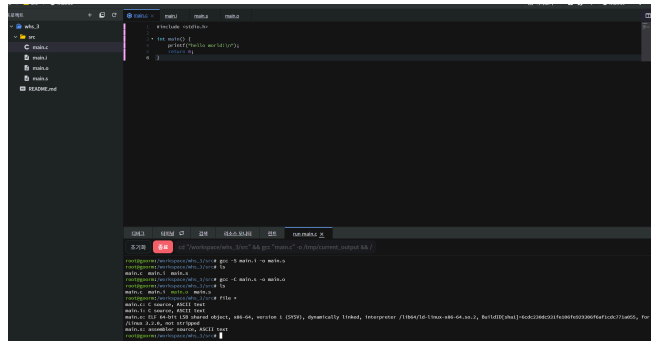
```

```

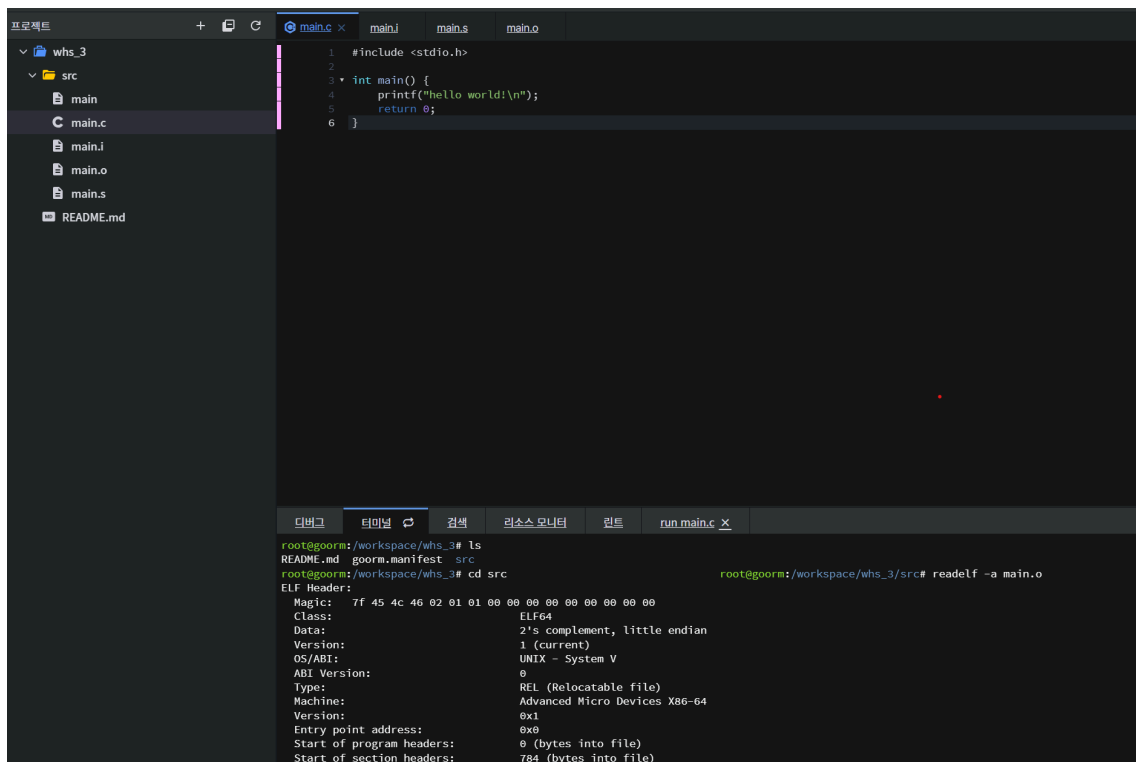
root@goorm: /workspace/whs_3/src# cd "/workspace/whs_3/" && gcc "main.c" -o /tmp/current_output && /
root@goorm: /workspace/whs_3/src# cd "/workspace/whs_3/" && gcc "main.c" -o /tmp/current_output && /tmp/current_output; rm -f /tmp/current_output
hello world!
root@goorm: /workspace/whs_3/src# gcc -E main.c -o main.i
root@goorm: /workspace/whs_3/src# ls
main.c  main.i  main.s
root@goorm: /workspace/whs_3/src# gcc -S main.i -o main.s
root@goorm: /workspace/whs_3/src# ls
main.c  main.i  main.s
root@goorm: /workspace/whs_3/src# gcc -C main.s -o main.o
root@goorm: /workspace/whs_3/src# ls
main.c  main.i  main.o  main.s
root@goorm: /workspace/whs_3/src#

```

gcc컴파일러 어셈블 과정 .o파일 확인하기 2



gcc컴파일러 어셈블 과정 .o파일 확인하기3



ELF헤더를 통해 파일의 전반적인 구조와 특성을 확인

