# CD LAB 6:

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SRN: PES2UG22CS232

DATE: 23/04/2025

**CODE:**

hello.c

#include<stdio.h>

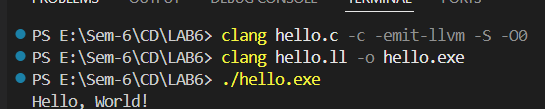
int main(){

    printf("Hello, World!\n");

    return 0;

}

**OUTPUT:**

****

**CODE:**

demo2.c

#include<stdio.h>

int main(){

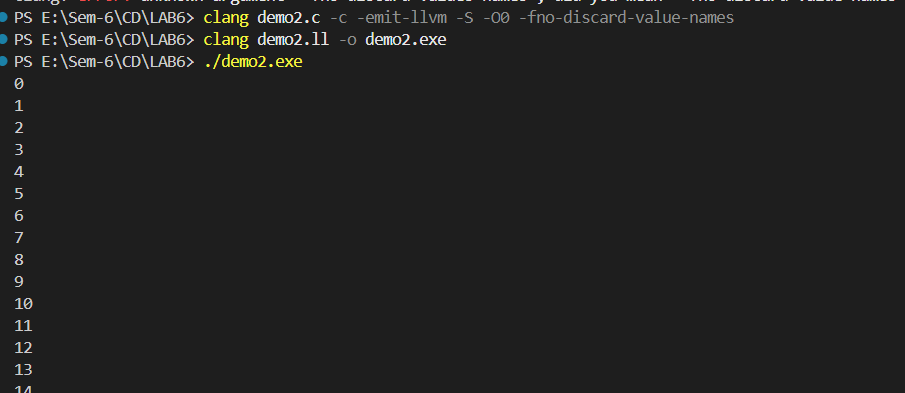
    for(int i=0; i<15; i++){

        printf("%d\n", i);

    }

}

**OUTPUT:**

****

**CODE:**

**demo3.ll**

@s1 = constant [44 x i8] c"Hi!\0a- Name: Janvii RV\0a- Srn: PES2UG22CS232\0a\00"

declare i32 @printf(i8\*, ...)

define i32 @main() {

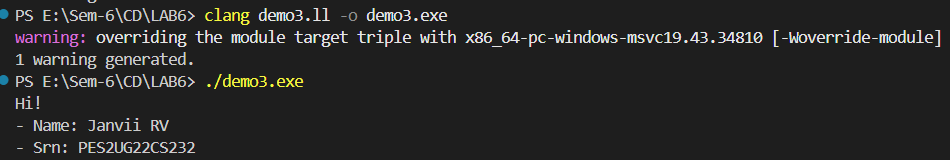
%s1\_ptr = getelementptr [44 x i8], [44 x i8]\* @s1, i32 0, i32 0

call i32 (i8\*, ...) @printf(i8\* %s1\_ptr)

ret i32 0

}

**OUTPUT:**

****

**CODE:**

script.py

llvm = r'''@s1 = constant [44 x i8] c"Hi!\0a- Name: Janvii RV\0a- Srn: PES2UG22CS232\0a\00"

declare i32 @printf(i8\*, ...)

define i32 @main() {

  %s1\_ptr = getelementptr [44 x i8], [44 x i8]\* @s1, i32 0, i32 0

  call i32 (i8\*, ...) @printf(i8\* %s1\_ptr)

  ret i32 0

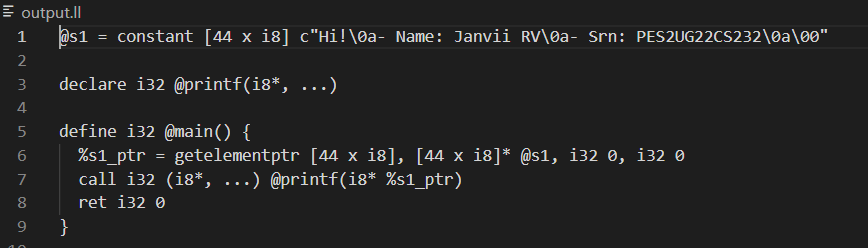
}

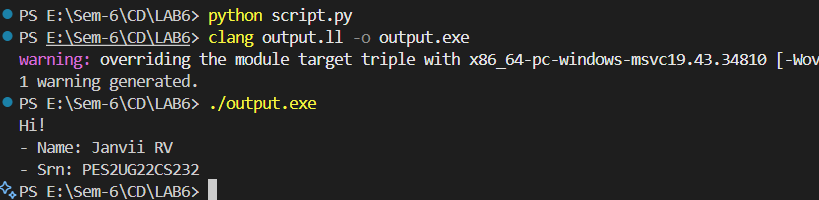
'''

with open('output.ll', 'w') as file:

    file.write(llvm)

**OUTPUT:**

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**CODE:**

**llvm.py**

llvm\_global = r'''@s1 = constant [4 x i8] c"Hi\0A\00" '''

llvm\_main = r''' 'define 132 @main) {'''

llvm\_print = r'''

    $s1\_ptr = getelementptr [4 x 18], [4 x 18]\* @s1, i32 0, i32 0

    call 132(18\*, ...) @printf(i8\* %s1\_ptr)'''

llvm\_ret = r'''

ret 132 0

}'''

with open('output.ll', 'w') as file:

    file.write(llvm\_global)

    file.write(llvm\_main)

    file.write(llvm\_print)

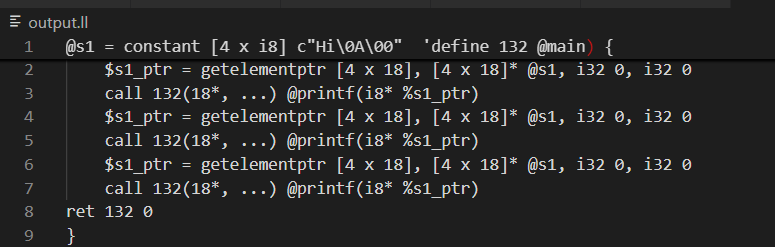
    file.write(llvm\_print)

    file.write(llvm\_print)

    file.write(llvm\_ret)

**OUTPUT:**

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