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EXERCISE 1

Output of problem_3_pre.c :

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ vi problem_3_pre.c

# 1 "problem_3.c"
# 1 "<built-in>" 1
# 1 "<built-in>" 3
# 361 "<built-in>" 3
# 1 "<command line>" 1
# 1 "<built-in>" 2
# 1 "problem_3.c" 2

main(){
float Resistor;
Resistor = 220 / 10;
printf("R = %6.2f \n", Resistor);
}
```

Compilation messages of problem_3_pre.c :

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc problem_3_pre.c
problem_3.c:4:1: warning: type specifier missing, defaults to 'int'
      [-Wimplicit-int]
main(){
^
problem_3.c:7:1: warning: implicitly declaring library function
'printf' with
      type 'int (const char *, ...)' [-Wimplicit-function-declaration]
printf("R = %6.2f \n", Resistor);
^
problem_3.c:7:1: note: include the header <stdio.h> or explicitly
provide a
      declaration for 'printf'
2 warnings generated.
```

Adding the stdio.h library to the code due to printf warnings:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc problem_3_pre.c
problem_3.c:4:1: warning: type specifier missing, defaults to 'int'
      [-Wimplicit-int]
main(){
^
problem_3.c:7:1: warning: implicitly declaring library function
'printf' with
      type 'int (const char *, ...)' [-Wimplicit-function-declaration]
```

```
printf("R = %6.2f \n", Resistor);
^
problem_3.c:7:1: note: include the header <stdio.h> or explicitly
provide a
      declaration for 'printf'
2 warnings generated.
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc problem_3.c
problem_3.c:5:1: warning: type specifier missing, defaults to 'int'
      [-Wimplicit-int]
main(){
^
1 warning generated.
```

Main warning solved giving main a return type:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc problem_3.c
Floreths-MacBook-Pro:lab3 florethgonzalez$
```

EXERCISE 2

Compilation of problem_3b.c:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ vi problem_3b.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ ls
a.out        problem_3.c  problem_3_pre.c  problem_3b.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc problem_3b.c
problem_3b.c:10:1: warning: type specifier missing, defaults to
'int' [-Wimplicit-int]
main(){
^
problem_3b.c:13:7: warning: missing terminating '"' character [-
Winvalid-pp-token]
scanf("%f, &current);
      ^
problem_3b.c:13:7: error: expected expression
problem_3b.c:18:2: error: expected '}'
}
 ^
problem_3b.c:10:7: note: to match this '{'
main(){
      ^
2 warnings and 2 errors generated.
Floreths-MacBook-Pro:lab3 florethgonzalez$
```

Running the executable program a.out:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$  ./a.out
R =  22.00
```

EXERCISE 3

Compiling problem_3c1.c and problem_3c2.c:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc -c problem_3c1.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc -c problem_3c2.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ ls
problem_3.c  problem_3b.c problem_3c1.o    problem_3c2.o
problem_3_pre.c  problem_3c1.c    problem_3c2.c
Floreths-MacBook-Pro:lab3 florethgonzalez$
```

Linking problem_3c1.o and problem_3c2.o to myprog:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc -o myprog problem_3c1.o
problem_3c2.o
Floreths-MacBook-Pro:lab3 florethgonzalez$ ./myprog
Enter the current value:1
The required resistor should be 5 Ohms.
```

EXERCISE 4

Compiling using gcc -c prog01.c:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ vi prog01.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc -c prog01.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ ls
myprog       problem_3_pre.c  problem_3c1.c    problem_3c2.c prog01.c
problem_3.c  problem_3b.c problem_3c1.o    problem_3c2.oprog01.o
```

>gcc -c compiles source files without linking.

Compiling using gcc prog01.c -o prog:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc prog01.c -o prog
Floreths-MacBook-Pro:lab3 florethgonzalez$ ls
myprog       problem_3_pre.c  problem_3c1.c    problem_3c2.cprog
prog01.o
problem_3.c  problem_3b.c problem_3c1.o    problem_3c2.oprog01.c
```

>gcc -o writes the build output to an output file.

Compiling using gcc compare.c -o compare:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc compare.c -o compare
Undefined symbols for architecture x86_64:
  "_main", referenced from:
     implicit entry/start for main executable
ld: symbol(s) not found for architecture x86_64
clang: error: linker command failed with exit code 1 (use -v to see
invocation)
Floreths-MacBook-Pro:lab3 florethgonzalez$
```

Compiling using gcc -c compare.c:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc -c compare.c
Floreths-MacBook-Pro:lab3 florethgonzalez$
```

Compiling my_main.c and linking compare.o and my_main.o to my_progs:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc -c my_main.c
Floreths-MacBook-Pro:lab3 florethgonzalez$ gcc my_main.o compare.o -o
my_progs
Floreths-MacBook-Pro:lab3 florethgonzalez$
```

Trying the executable my_progs:

```
Floreths-MacBook-Pro:lab3 florethgonzalez$ ./my_progs
The biggest is: 10
The smallest is: 4
Floreths-MacBook-Pro:lab3 florethgonzalez$
```