

- 1.– Create a folder called Fortran on your hard drive.

Go into the folder and copy the attached text files: `prog.f`, `sub1.f`, `sub2.f` and `sub3.f`, which correspond to practice number 1.

You are asked to:

- a) Compact the program and improve its readability and programming style by using the following statements: `do-enddo`, `e if-then-else-endif`.
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- 2.– Create a folder called C on your hard drive.

Go into the folder and copy the attached text files: `prog.c`, `sub1.c`, `sub2.c` y `sub3.c`, which correspond to practice number 2.

You are asked to:

- a) Compact the program and improve its readability and programming style by using the following statements: `for(;;)` e `if-else`.
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- 3.– Write the following two Fortran programs...

```
! Loop with integer variables
implicit real*4 (a-h,o-z)

i0=0
i1=10
id=1

do i=i0,i1,id
  x=dbl(i)/dbl(i1)
  write(6,'(f24.18)') x
enddo

read(5,'()')
call exit(0)

end
```

```
! Loop with real variables
implicit real*4 (a-h,o-z)

x0=0.
x1=1.
xd=0.1

do x=x0,x1,xd

  write(6,'(f24.18)') x
enddo

read(5,'()')
call exit(0)

end
```

You are asked to:

- a) Analyze them. Compile them, link them, and execute them. (*). Change to `REAL*8` and repeat. Compare the results.
- b) Translate them into C language. Compile them, link them, and execute them. (*). Compare the results.
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(*) **Note:** You must use the `-O0` compiling option with the `gfortran` and the `gcc` compilers. With `gfortran`, also add `-std=legacy`.