



# UNIVERSIDAD NACIONAL DE INGENIERÍA

## Facultad de Ciencias

### Escuela Profesional de Ciencia de la Computación

## CUARTA PRÁCTICA CALIFICADA

Curso: Fundamentos de Programación CC112 - A

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Código: 20241656F

1.

```
enrique@enrique-LQ-15APH8:~/pc02-cc112a-enriqu3/PC4$ make asan
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA01.cpp -o build/asan/PREGUNTA01
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA02.cpp -o build/asan/PREGUNTA02
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA03.cpp -o build/asan/PREGUNTA03
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA04.cpp -o build/asan/PREGUNTA04
enrique@enrique-LQ-15APH8:~/pc02-cc112a-enriqu3/PC4$ ./build/asan/PREGUNTA01
CASO 1
Polinomio 1:  $1x^2 + 0x^1 + 3$ 
Polinomio 2:  $-4x^1 + 5$ 
Polinomio 3:  $3x^2 + 0x^1 + 1$ 
Suma:  $4x^2 + -4x^1 + 9$ 
Producto:  $-12x^5 + 15x^4 + -40x^3 + 50x^2 + -12x^1 + 15$ 

CASO 2
P4:  $2x^1 + 0$ 
P5:  $1x^1 + 2$ 
P6: 3
Suma:  $3x^1 + 5$ 
Producto:  $6x^2 + 12x^1 + 0$ 
enrique@enrique-LQ-15APH8:~/pc02-cc112a-enriqu3/PC4$
```

2.

```
enrique@enrique-LQ-15APH8:~/pc02-cc112a-enriqu3/PC4$ make asan
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA01.cpp -o build/asan/PREGUNTA01
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA02.cpp -o build/asan/PREGUNTA02
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA03.cpp -o build/asan/PREGUNTA03
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA04.cpp -o build/asan/PREGUNTA04
enrique@enrique-LQ-15APH8:~/pc02-cc112a-enriqu3/PC4$ ./build/asan/PREGUNTA02
CASO 1


| equipo    | PG | PE | PP | GF  | GC  | Pts | Rend    |
|-----------|----|----|----|-----|-----|-----|---------|
| brasil    | 92 | 6  | 2  | 280 | 114 | 282 | 94%     |
| bolivia   | 91 | 4  | 5  | 299 | 119 | 277 | 92%     |
| argentina |    | 84 | 9  | 7   | 273 | 116 | 261 87% |
| chile     | 71 | 14 | 15 | 270 | 143 | 227 | 75%     |
| peru      | 30 | 27 | 43 | 184 | 203 | 117 | 39%     |


CAMPEON DEL TORNEO: brasil

CASO 2


| equipo    | PG | PE | PP | GF  | GC  | Pts | Rend   |
|-----------|----|----|----|-----|-----|-----|--------|
| chile     | 98 | 1  | 1  | 315 | 124 | 295 | 98%    |
| brasil    | 85 | 13 | 2  | 280 | 121 | 268 | 89%    |
| bolivia   | 72 | 26 | 2  | 266 | 121 | 242 | 80%    |
| peru      | 56 | 24 | 20 | 243 | 184 | 192 | 64%    |
| argentina |    | 0  | 99 | 1   | 228 | 231 | 99 33% |


CAMPEON DEL TORNEO: chile
enrique@enrique-LQ-15APH8:~/pc02-cc112a-enriqu3/PC4$
```

3.

```
enrique@enrique-LOQ-15APH8:~/pc02-cc112a-emriqu3/PC4$ make asan
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA01.cpp -o build/asan/PREGUNTA01
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA02.cpp -o build/asan/PREGUNTA02
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA03.cpp -o build/asan/PREGUNTA03
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA04.cpp -o build/asan/PREGUNTA04
enrique@enrique-LOQ-15APH8:~/pc02-cc112a-emriqu3/PC4$ ./build/asan/PREGUNTA03
CASO 1
INVENTARIO
Codigo: 100 | Nombre: teclado | Precio: 10.5 | Stock: 5
Codigo: 101 | Nombre: mouse | Precio: 21 | Stock: 10
Codigo: 102 | Nombre: monitor | Precio: 31.5 | Stock: 15
Codigo: 103 | Nombre: laptop | Precio: 42 | Stock: 20
Codigo: 104 | Nombre: impresora | Precio: 52.5 | Stock: 25
Buscando 102...
Encontrado: monitor

CASO 2
INVENTARIO
Codigo: 50 | Nombre: cargador | Precio: 15 | Stock: 100
Codigo: 51 | Nombre: audifonos | Precio: 25.5 | Stock: 50
enrique@enrique-LOQ-15APH8:~/pc02-cc112a-emriqu3/PC4$
```

4.

```
enrique@enrique-LOQ-15APH8:~/pc02-cc112a-emriqu3/PC4$ make asan
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA01.cpp -o build/asan/PREGUNTA01
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA02.cpp -o build/asan/PREGUNTA02
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA03.cpp -o build/asan/PREGUNTA03
mkdir -p build/asan
g++ -std=c++17 -Wall -Wextra -Wpedantic -fsanitize=address -fno-omit-frame-pointer -g -O1 PREGUNTA04.cpp -o build/asan/PREGUNTA04
enrique@enrique-LOQ-15APH8:~/pc02-cc112a-emriqu3/PC4$ ./build/asan/PREGUNTA04
CASO 1
pedido: 101
cliente: carlos perez
- laptop | 1000
- mouse | 50
- teclado | 300
total: 1400
lo mas caro es: laptop

CASO 2
pedido: 200
cliente: maria lopez
- pizza | 45
- gaseosa | 7.5
total: 60
enrique@enrique-LOQ-15APH8:~/pc02-cc112a-emriqu3/PC4$
```