

SOLUCIONARIO PC4 – FUNDAMENTOS DE LA PROGRAMACION – CC112

P1.

Primera salida:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ ./p1_sol.exe
Polinomio 1: 1x^2 + 0x^1 + 3x^0
Polinomio 2: -4x^1 + 5x^0
Polinomio 3: 3x^2 + 0x^1 + 1x^0

Suma de los tres polinomios: 4x^2 + -4x^1 + 9x^0

Producto de los tres polinomios: -12x^5 + 15x^4 + -40x^3 + 50x^2 + -12x^1 + 15x^0
```

Segunda salida con valgrind:

```
==712== LEAK SUMMARY:
==712==   definitely lost: 64 bytes in 4 blocks
==712==   indirectly lost: 0 bytes in 0 blocks
==712==   possibly lost: 0 bytes in 0 blocks
==712==   still reachable: 0 bytes in 0 blocks
==712==           suppressed: 0 bytes in 0 blocks
--712--
```

Hay fuga de memoria, se corrige el código y hago una tercera salida:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ valgrind --leak-check=full ./p1_sol.exe
==778== Memcheck, a memory error detector
==778== Copyright (C) 2002-2022, and GNU GPL'd, by Julian Seward et al.
==778== Using Valgrind-3.22.0 and LibVEX; rerun with -h for copyright info
==778== Command: ./p1_sol.exe
==778==
Polinomio 1: 1x^2 + 0x^1 + 3x^0
Polinomio 2: -4x^1 + 5x^0
Polinomio 3: 3x^2 + 0x^1 + 1x^0

Suma de los tres polinomios: 4x^2 + -4x^1 + 9x^0

Producto de los tres polinomios: -12x^5 + 15x^4 + -40x^3 + 50x^2 + -12x^1 + 15x^0
==778== HEAP SUMMARY:
==778==   in use at exit: 0 bytes in 0 blocks
==778==   total heap usage: 9 allocs, 9 frees, 74,848 bytes allocated
==778== All heap blocks were freed -- no leaks are possible
==778== For lists of detected and suppressed errors, rerun with: -s
==778== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
```

P2.

Primera salida:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ ./p2_sol.exe
ingrese nombre del equipo 1: sel1
ingrese nombre del equipo 2: sel2
ingrese nombre del equipo 3: sel3
ingrese nombre del equipo 4: sel4
ingrese nombre del equipo 5: sel5

=====TABLA DE POSICIONES=====

Seccion      PG      PE      PP      GF      GC      DG      Pts      Rend(%)
-----+-----+-----+-----+-----+-----+-----+-----+-----+
sel2        97       0       3     339     124     215     291      97
sel4        81       3      16     331     186     145     246      82
sel5        43      22      35     236     239     -3      151    50.3333
sel1        28      53      19     257     249      8      137    45.6667
sel3        30      36      34     262     276    -14      126      42

CAMPEON: sel2 | Puntaje: 291 | DG: 215 | Rendimiento: 97%
```

Segunda salida con valgrind:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ valgrind --leak-check=full ./p2_sol.exe
==780== Memcheck, a memory error detector
==780== Copyright (C) 2002-2022, and GNU GPL'd, by Julian Seward et al.
==780== Using Valgrind-3.22.0 and LibVEX; rerun with -h for copyright info
==780== Command: ./p2_sol.exe
==780==
ingrese nombre del equipo 1: sel1
ingrese nombre del equipo 2: sel2
ingrese nombre del equipo 3: sel3
ingrese nombre del equipo 4: sel4
ingrese nombre del equipo 5: sel5

=====TABLA DE POSICIONES=====

```

Seleccion	PG	PE	PP	GF	GC	DG	Pts	Rend(%)
sel3	96	4	0	366	146	220	292	97.3333
sel1	44	31	25	261	226	35	163	54.3333
sel5	30	5	65	283	292	-89	95	31.6667
sel4	4	81	15	193	233	-40	93	31
sel2	4	43	53	188	299	-111	55	18.3333

```
CAMPEON: sel3 | Puntaje: 292 | DG: 220 | Rendimiento: 97.3333%
==780==
==780== HEAP SUMMARY:
==780==     in use at exit: 0 bytes in 0 blocks
==780==   total heap usage: 4 allocs, 4 frees, 76,144 bytes allocated
==780==
==780== All heap blocks were freed -- no leaks are possible
==780==
==780== For lists of detected and suppressed errors, rerun with: -s
==780== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
```

P3.

Primera salida:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ ./p3_sol.exe
===== 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 producto con codigo 102 ...
Producto encontrado: monitor | Precio 31.5
```

Segunda salida con valgrind:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ valgrind --leak-check=full ./p3_sol.exe
==782== Memcheck, a memory error detector
==782== Copyright (C) 2002-2022, and GNU GPL'd, by Julian Seward et al.
==782== Using Valgrind-3.22.0 and LibVEX; rerun with -h for copyright info
==782== Command: ./p3_sol.exe
==782==
===== 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 producto con codigo 102 ...
Producto encontrado: monitor | Precio 31.5
==782==
==782== HEAP SUMMARY:
==782==     in use at exit: 0 bytes in 0 blocks
==782==   total heap usage: 8 allocs, 8 frees, 74,951 bytes allocated
==782==
==782== All heap blocks were freed -- no leaks are possible
==782==
==782== For lists of detected and suppressed errors, rerun with: -s
==782== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
```

P4.

Primera salida:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACIÓN/PC4$ ./p4_sol.exe
Pedido N°: 101
Cliente: Carlos Perez

Items:
laptop | Cant: 1 | Precio: 100
mouse | Cant: 2 | Precio: 200
teclado | Cant: 3 | Precio: 300

Total: 1400
Item mas caro: teclado | Precio: 300
```

Segunda salida con valgrind:

```
christian@DESKTOP-HIJILBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACIÓN/PC4$ valgrind --leak-check=full ./p4_sol.exe
==785== Memcheck, a memory error detector
==785== Copyright (C) 2002-2022, and GNU GPL'd, by Julian Seward et al.
==785== Using Valgrind-3.22.0 and LibVEX; rerun with -h for copyright info
==785== Command: ./p4_sol.exe
==785==
Pedido N°: 101
Cliente: Carlos Perez

Items:
laptop | Cant: 1 | Precio: 100
mouse | Cant: 2 | Precio: 200
teclado | Cant: 3 | Precio: 300

Total: 1400
Item mas caro: teclado | Precio: 300
==785==
==785== HEAP SUMMARY:
==785==     in use at exit: 0 bytes in 0 blocks
==785==   total heap usage: 8 allocs, 8 frees, 74,890 bytes allocated
==785==
==785== All heap blocks were freed -- no leaks are possible
==785==
==785== For lists of detected and suppressed errors, rerun with: -s
==785== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
```