

SOLUCIONARIO PC4 – FUNDAMENTOS DE LA PROGRAMACION – CC112

P1.

Primera salida:

```
christian@DESKTOP-HIJ1LBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ ./pl_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-HIJ1LBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/PC4$ valgrind --leak-check=full ./pl_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: ./pl_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==
==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==
==778== All heap blocks were freed -- no leaks are possible
==778==
==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-HIJ1LBP:/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=====
Seleccion    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-HIJ1LBP:/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   203   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-HIJ1LBP:/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-HIJ1LBP:/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-HIJ1LBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/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-HIJ1LBP:/mnt/c/Users/Christian/Desktop/UNI/CC112_FUNDAMENTOS DE LA PROGRAMACION/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)
```