



Problem 1:

 alvinvn@len-trexler:~/hw/hw2

```
alvinvn@len-trexler 00:50:44 ~/hw/hw2
$ ls
Coins.h  Coins.h.gch  coins_main.cpp  coins_menu.cpp  hw2.zip  simple_main.cpp
alvinvn@len-trexler 00:50:46 ~/hw/hw2
$ g++ simple_main.cpp
alvinvn@len-trexler 00:50:54 ~/hw/hw2
$ valgrind a.out
==706== Memcheck, a memory error detector
==706== Copyright (C) 2002-2013, and GNU GPL'd, by Julian Seward et al.
==706== Using Valgrind-3.10.0 and LibVEX; rerun with -h for copyright info
==706== Command: a.out
==706==
I started with 100 quarters, 10 dimes, 10 nickels, 100 pennies in my pocket
I bought a candy bar for 482 cents using 19 quarters, 10 dimes, 10 nickels, 482 pennies
I have 81 quarters, 0 dimes, 0 nickels, -382 pennies left in my pocket
==706==
==706== HEAP SUMMARY:
==706==    in use at exit: 72,704 bytes in 1 blocks
==706==   total heap usage: 1 allocs, 0 frees, 72,704 bytes allocated
==706==
==706== LEAK SUMMARY:
==706==    definitely lost: 0 bytes in 0 blocks
==706==    indirectly lost: 0 bytes in 0 blocks
==706==    possibly lost: 0 bytes in 0 blocks
==706==    still reachable: 72,704 bytes in 1 blocks
==706==    suppressed: 0 bytes in 0 blocks
==706== Rerun with --leak-check=full to see details of leaked memory
==706==
==706== For counts of detected and suppressed errors, rerun with: -v
==706== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 1 from 1)
alvinvn@len-trexler 00:50:59 ~/hw/hw2
$ 
```

Problem 2:

```
alvinvn@len-trexler:~/hw/hw2
$ ls
a.out*  Coins.h  Coins.h.gch  coins_main.cpp  coins_menu.cpp  hw2.zip  simple_main.cpp
alvinvn@len-trexler:~/hw/hw2
$ g++ coins_main.cpp
alvinvn@len-trexler:~/hw/hw2
$ valgrind a.out
==717== Memcheck, a memory error detector
==717== Copyright (C) 2002-2013, and GNU GPL'd, by Julian Seward et al.
==717== Using Valgrind-3.10.0 and LibVEX; rerun with -h for copyright info
==717== Command: a.out
==717==
I started with 5 quarters, 3 dimes, 6 nickels, 8 pennies in my pocket
I take out 68 cents from my pocket to buy a bag of chips
I bought a bag of chips for 68 cents and now I have 3 quarters, 0 dimes, 0 nickels, -60 pennies left in my pocket
I transfer 205 cents to my pocket from my piggybank
I now have this much change in my pocket 11 quarters, 0 dimes, 1 nickels, -60 pennies and this much in my piggybank 42 quarters, 30 dimes, 9 nickels, -155 pennies
I have found change from my sofa and deposited into my piggybank, I now have $22.55 in my piggyBank
==717==
==717== HEAP SUMMARY:
==717==   in use at exit: 72,704 bytes in 1 blocks
==717==   total heap usage: 1 allocs, 0 frees, 72,704 bytes allocated
==717==
==717== LEAK SUMMARY:
==717==   definitely lost: 0 bytes in 0 blocks
==717==   indirectly lost: 0 bytes in 0 blocks
==717==   possibly lost: 0 bytes in 0 blocks
==717==   still reachable: 72,704 bytes in 1 blocks
==717==   suppressed: 0 bytes in 0 blocks
==717== Rerun with --leak-check=full to see details of leaked memory
==717==
==717== For counts of detected and suppressed errors, rerun with: -v
==717== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 1 from 1)
alvinvn@len-trexler:~/hw/hw2
$
```

Problem 3:

```
alvinvn@len-trexler ~/hw/hw2
$ g++ coins_menu.cpp
alvinvn@len-trexler 00:53:50 ~/hw/hw2
$ valgrind a.out
==732== Memcheck, a memory error detector
==732== Copyright (C) 2002-2013, and GNU GPL'd, by Julian Seward et al.
==732== Using Valgrind-3.10.0 and LibVEX; rerun with -h for copyright info
==732== Command: a.out
==732==
Menu
1. Deposit Change
2. Extract Change
3. Display balance
Input options 1-3 or 4 to exit:
1
Enter the amount of pennies: 5
Enter the amount of nickels: 5
Enter the amount of dimes: 5
Enter the amount of quarters: 5
Input options 1-3 or 4 to exit:
3
Your balance is: 5 quarters, 5 dimes, 5 nickels, 5 pennies
Input options 1-3 or 4 to exit:
2
Enter amount to extract: 1
Input options 1-3 or 4 to exit:
3
Your balance is: 5 quarters, 5 dimes, 5 nickels, 4 pennies
Input options 1-3 or 4 to exit:
4
Done
==732==
==732== HEAP SUMMARY:
==732==    in use at exit: 72,704 bytes in 1 blocks
==732== total heap usage: 1 allocs, 0 frees, 72,704 bytes allocated
==732==
==732== LEAK SUMMARY:
==732==    definitely lost: 0 bytes in 0 blocks
==732==    indirectly lost: 0 bytes in 0 blocks
==732==    possibly lost: 0 bytes in 0 blocks
==732==    still reachable: 72,704 bytes in 1 blocks
==732==    suppressed: 0 bytes in 0 blocks
==732== Rerun with --leak-check=full to see details of leaked memory
==732==
==732== For counts of detected and suppressed errors, rerun with: -v
==732== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 1 from 1)
alvinvn@len-trexler 00:54:12 ~/hw/hw2
$
```