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Analysis of a few functions and any embedded functions Show code snippets with screenshots or copy/pasted code

Show: deposit_coins,extract_exact_change,has_exact_change_for_coins And any other function that you think is useful for grading.

Coins.h

```
sing namespace std;
 onst int CENTS_PER_QUARTER = 25, CENTS_PER_DIME = 10, CENTS_PER_NICKEL = 5;
         int quarters, dimes, nickels, pennies;
        lic:
Coins(int q, int d, int n, int p){
   quarters = q;
   dimes = d;
   nickels = n;
   pennies = p;
         void deposit_coins( Coins & c ){
  quarters += c.quarters;
  dimes += c.dimes;
  nickels += c.nickels;
               c.dimes = 0;
c.nickels = 0;
c.pennies = 0;
         bool has_exact_change_for_coins( Coins c ){
    return quarters >= c.quarters && dimes >= c.dimes &&
    nickels >= c.nickels && pennies >= c.pennies;
         Coins extract_exact_change( Coins c ){
                                                                                                                                                               x<sup>2</sup> ∧ ₩ 6 m □ 40) A ☑ 10:17 PM 1/24/2018 🖥
Type here to search
                                                Coins extract_exact_change( Coins o
               if (has_exact_change_for_coins(c)){
                    quarters -= c.quarters;
dimes -= c.dimes;
nickels -= c.nickels;
pennies -=c.pennies;
                                                           " << endl;
                    return Coins(0, 0, 0, 0);
         int total_value_in_cents(){
    return quarters*CENTS_PER_QUARTER + dimes*CENTS_PER_DIME +
    nickels*CENTS_PER_NICKEL + pennies;
         void print( ostream & out ){
                                                            " << dimes << " dimes, " << nies << " pennies.";
               cout << quarters << " quarters, " << di
nickels << " nickels, " << pennies <<</pre>
         int get_quarters(){
                 eturn quarters;
         int get_dimes(){
    return dimes;
  int get_nickels(){
INSERT --
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                                                                                                                                                               g<sup>A</sup> ∧ ♥ ♠ ■ □ Φ A ₪ 10:17 PM 1/24/2018 ■
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simple_main.cpp

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# mount divery opins - mount of the control of the
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coins_main.cpp

coins_menu.cpp

```
## Case **B': case **B': cout << "INVERTIGATION AMOUNT: " < composite very count of the count of
```

Successful execution with Valgrind screenshot

simple_main.cpp

```
Quit
 nter a command character:
 xiting from Coin Bank
mschal@barry-dylan 22:26:18 ~/hw/hw2
$ valgrind simple_main.cpp
valgrind: ./simple_main.cpp: Permission denied
 schal@barry-dylan 22:28:08 ~/hw/hw2
valgrind simple_main
 =14755== Memcheck, a memory error detector

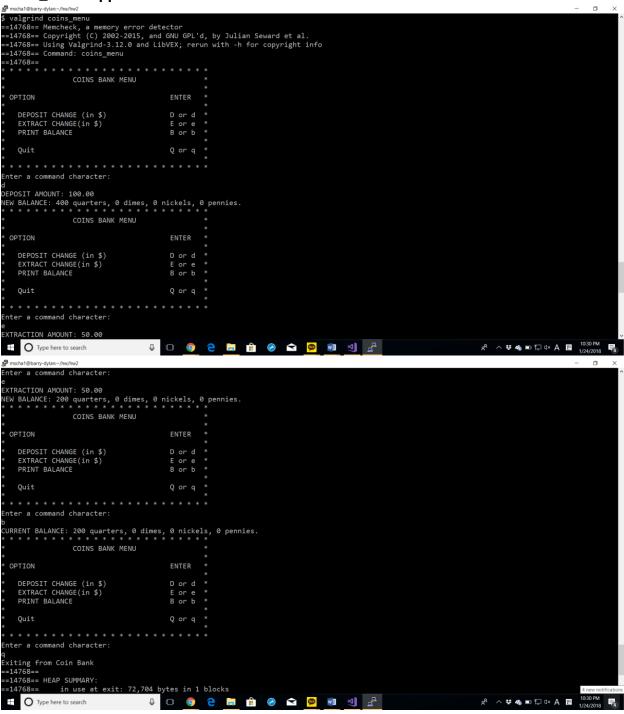
=14755== Copyright (C) 2002-2015, and GNU GPL'd, by Julian Seward et al.

=14755== Using Valgrind-3.12.0 and LibVEX; rerun with -h for copyright info
 =14755== Command: simple main
 =14755==
  *14/55==
started with 100 quarters, 10 dimes, 10 nickels, 100 pennies. in my pocket
bought a candy bar for 482 cents using19 quarters, 0 dimes, 1 nickels, 2 pennies.
have 81 quarters, 10 dimes, 9 nickels, 98 pennies. left in my pocket
 =14755==
=14755== HEAP SUMMARY:
 =14755== in use at exit: 72,704 bytes in 1 blocks
=14755== total heap usage: 1 allocs, 0 frees, 72,704 bytes allocated
 :=14755==
:=14755== LEAK SUMMARY:
 =14755== LEAR SUMMARY:
=14755== definitely lost: 0 bytes in 0 blocks
=14755== indirectly lost: 0 bytes in 0 blocks
=14755== possibly lost: 0 bytes in 0 blocks
=14755== still reachable: 72,704 bytes in 1 blocks
=14755== suppressed: 0 bytes in 0 blocks
=14755== Rerun with --leak-check=full to see details of leaked memory
==14755==
==14755==
==14755==
==14755== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
nschal@barry-dylan 22:28:17 ~/hw/hw2
                                                                   g<sup>R</sup> ∧ ♥ ♠ ■ □ □ □× A ₪ 10:28 PM 1/24/2018
Type here to search
```

coins main.cpp

```
### Application of the content of th
```

coins_menu.cpp



```
Enter a command character:

CURRENT BALANCE: 200 quarters, 0 dimes, 0 nickels, 0 pennies.

COINS BANK MENU

OPTION

ENTER

DEPOSIT CHANGE (in $)

D or d

EXTRACT CHANGE(in $)

Enter a command character:

Quit

Q or q

Enter a command character:

Enter a command character:

Exiting from Coin Bank

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```

Test Output screenshots with descriptions of each test

simple_main.cpp

```
$ simple_main

I started with 100 quarters, 10 dimes, 10 nickels, 100 pennies. in my pocket

I bought a candy bar for 482 cents using19 quarters, 0 dimes, 1 nickels, 2 pennies.

I have 81 quarters, 10 dimes, 9 nickels, 98 pennies. left in my pocket

mschal@barry-dylan 22:24:10 ~/hw/hw2

$ O Type here to search

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```

Executed simple_main.cpp as outlined in hw2 problem 1

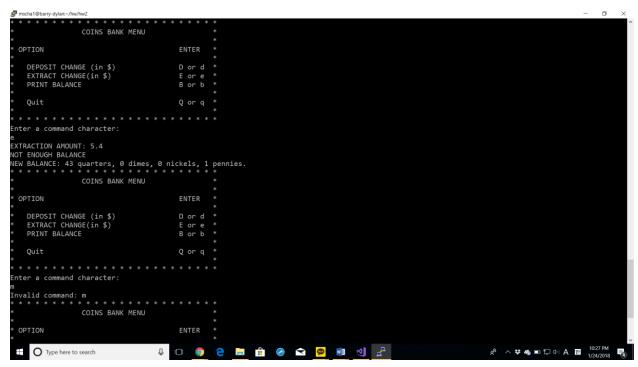
coins_main.cpp

Executed coins_main.cpp as outlined in hw2 problem 2

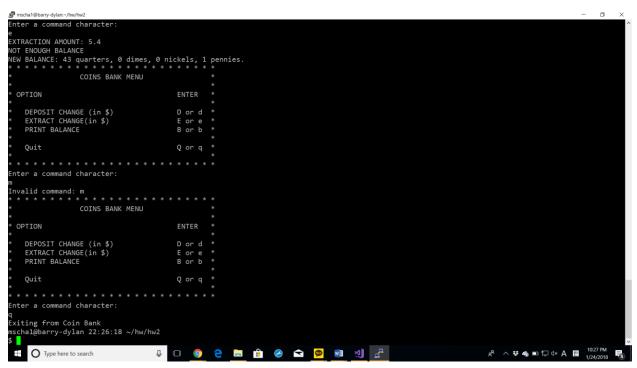
coins_menu.cpp

```
mscha1@barry-dylan:~/hw/h
                                                                                                           Ø
            COINS BANK MENU
  DEPOSIT CHANGE (in $)
EXTRACT CHANGE(in $)
PRINT BALANCE
                              D or d
  Quit
                              Q or q
nter a command character:
COINS BANK MENU
  DEPOSIT CHANGE (in $)
EXTRACT CHANGE(in $)
PRINT BALANCE
                              D or d
  Quit
                              Q or q
 nter a command character:
EXTRACTION AMOUNT: 15.65
NOT ENOUGH BALANCE
R<sup>0</sup> ∧ ♥ ♠ ■ □ Φ A ₪ 10:26 PM 1/24/2018
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```

- Deposited \$10.76 dollars to the coin bank.
- Unable to extract \$15.65 dollars from the coin bank. Error: NOT ENOUGH BALANCE appeared.



Extracted \$5.4 dollars from the coin bank.



Entered invalid command "m".

```
0
 DEPOSIT CHANGE (in $)
EXTRACT CHANGE(in $)
PRINT BALANCE
  Quit
                            Q or q
 nter a command character:
COINS BANK MENU
                           ENTER
 OPTION
  DEPOSIT CHANGE (in $)
EXTRACT CHANGE(in $)
PRINT BALANCE
                           D or d
E or e
B or b
  Ouit
q
Exiting from Coin Bank
mschal@barry-dylan 22:36:17 ~/hw/hw2
$ |
                        g<sup>A</sup> ∧ ♥ ♠ ₪ □ 10× A ₪ 10:36 PM 1/24/2018
Type here to search
```

- Displayed current balance "b"
- Exited from the program "q"