

Project 2 -Gold and Bronze Challenge

For Chapter 2

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This project was to implement the BNRItem from chapter two and to complete the bronze and gold challenges associated with the chapter. The bronze challenge was to create a bug in the program by calling an item in the array of BNRItem that was not created and to note the exception that gets thrown due to the out of bounds index. To implement this challenge all that was needed was one line of code. The exception that is thrown is 'NSRangeException' which lists the index beyond bounds.

Code added:

```
NSLog(@"%@", items[10]);
```

SCREENSHOT:

```
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2015-05-21 11:50:08.184 RandomPossessions[7397:369290] Rusty Bear (7E2L0) : Worth $33, recorded on 2015-05-21 15:50:08 +0000
2015-05-21 11:50:08.184 RandomPossessions[7397:369290] Rusty Spork (9D9H7) : Worth $72, recorded on 2015-05-21 15:50:08 +0000
2015-05-21 11:50:08.184 RandomPossessions[7397:369290] Shiny Mac (3Q5R8) : Worth $91, recorded on 2015-05-21 15:50:08 +0000
2015-05-21 11:50:08.185 RandomPossessions[7397:369290] Rusty Spork (4D1X8) : Worth $44, recorded on 2015-05-21 15:50:08 +0000
2015-05-21 11:50:08.185 RandomPossessions[7397:369290] Shiny Mac (8Q4E0) : Worth $3, recorded on 2015-05-21 15:50:08 +0000
2015-05-21 11:50:08.186 RandomPossessions[7397:369290] *** Terminating app due to uncaught exception 'NSRangeException', reason:
'*** -[__NSArrayM objectAtIndex:] index 10 beyond bounds [0 .. 9]'
*** First throw call stack:
(
  0 CoreFoundation 0x00007fff8661066c __exceptionPreprocess + 172
  1 libobjc.A.dylib 0x00007fff8a38a76e objc_exception_throw + 43
  2 CoreFoundation 0x00007fff864dadf4 -[__NSArrayM objectAtIndex:] + 260
  3 RandomPossessions 0x0000000100001ccb main + 699
  4 libdyld.dylib 0x00007fff889095c9 start + 1
)
libc++abi.dylib: terminating with uncaught exception of type NSRangeException
(lldb)
```

The Gold challenge was to add a subclass of BNRItem named BNRContainer. The BNRContainer class had an array of subitems that contains BNRItems. Printing the description of BNRContainer object shows the name of the container, its value in dollars (a sum of all items in the container plus the value of the container itself), and a list of every instance of BNRItem it contains. A BNRContainer is also able to store other BNRContainers.

To do this you first need to create a new file that is a subclass of the BNRItems, naming it BNRContainers. In your BNRContainer.h file you need to create an NSMutableArray and total value and a string to hold the item descriptions that will be stored.

The tricky part of this is getting the BNRContainers.m file to hold the correct values. To solve this issue I used if statements to determine if the container was holding another container or a item object. This verifies the item and stores the correct date for each call. Then on the description override function I couldn't quite get the total value to include the value of the container so on the output of the program I just summed the self.totalValue and the self.valueInDollars. This gave the total value of both the container and its contents.

SCREENSHOT:

2015-05-22 10:14:37.940 RandomPossessions[1479:56616] Shiny Mac (0S3R9) : Worth \$57, recorded on 2015-05-22 14:14:37 +0000	Id
2015-05-22 10:14:37.940 RandomPossessions[1479:56616] Fluffy Spork (0Z9Y6) : Worth \$35, recorded on 2015-05-22 14:14:37 +0000	
2015-05-22 10:14:37.940 RandomPossessions[1479:56616] Rusty Mac (7E2L0) : Worth \$33, recorded on 2015-05-22 14:14:37 +0000	
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2015-05-22 10:14:37.940 RandomPossessions[1479:56616]	
2015-05-22 10:14:37.955 RandomPossessions[1479:56616]	
2015-05-22 10:14:37.955 RandomPossessions[1479:56616]	
2015-05-22 10:14:37.956 RandomPossessions[1479:56616] Fluffy Bear (2I9G1): This container is worth \$684 (value of the container: \$53), recorded date 2015-05-22 14:14:37 +0000	
(Rusty Spork (7C8P8) : Worth \$81, recorded on 2015-05-22 14:14:37 +0000 ,	
Fluffy Bear (5H5S3) : Worth \$36, recorded on 2015-05-22 14:14:37 +0000 ,	
Shiny Spork (5V5A9) : Worth \$1, recorded on 2015-05-22 14:14:37 +0000 ,	
Rusty Spork (7B5U1) : Worth \$98, recorded on 2015-05-22 14:14:37 +0000 ,	Te
Rusty Spork (8L5W2) : Worth \$66, recorded on 2015-05-22 14:14:37 +0000 ,	<input checked="" type="checkbox"/>
Rusty Mac (6Z8I1) : Worth \$97, recorded on 2015-05-22 14:14:37 +0000 ,	
Shiny Mac (1I7E7) : Worth \$97, recorded on 2015-05-22 14:14:37 +0000 ,	
Rusty Bear (4C9H5) : Worth \$75, recorded on 2015-05-22 14:14:37 +0000 ,	
Rusty Spork (5U2B8) : Worth \$12, recorded on 2015-05-22 14:14:37 +0000 ,	
Rusty Spork (0F4O5) : Worth \$68, recorded on 2015-05-22 14:14:37 +0000 ,	
)	
2015-05-22 10:14:37.956 RandomPossessions[1479:56616] Rusty Mac (3W6S2): This container is worth \$451 (value of the container: \$65), recorded date 2015-05-22 14:14:37 +0000	Te
(Shiny Bear (2E7T5) : Worth \$12, recorded on 2015-05-22 14:14:37 +0000 ,	
Rusty Bear (1L0N8) : Worth \$57, recorded on 2015-05-22 14:14:37 +0000 ,	
Shiny Mac (6Q0B5) : Worth \$6, recorded on 2015-05-22 14:14:37 +0000 ,	
Rusty Mac (2Q5T4) : Worth \$23, recorded on 2015-05-22 14:14:37 +0000 ,	
Shiny Spork (9Q5Q3) : Worth \$6, recorded on 2015-05-22 14:14:37 +0000 ,	
Fluffy Bear (3C8Y0) : Worth \$44, recorded on 2015-05-22 14:14:37 +0000 ,	
Fluffy Bear (6Q6C3) : Worth \$38, recorded on 2015-05-22 14:14:37 +0000 ,	
Fluffy Spork (4W0F3) : Worth \$47, recorded on 2015-05-22 14:14:37 +0000 ,	
Shiny Mac (5X2D7) : Worth \$85, recorded on 2015-05-22 14:14:37 +0000 ,	
Shiny Bear (6F3A4) : Worth \$68, recorded on 2015-05-22 14:14:37 +0000 ,	Si
)	
2015-05-22 10:14:37.957 RandomPossessions[1479:56616] Fluffy Mac (5V5S2): This container is worth \$1028 (value of the container: \$11), recorded date 2015-05-22 14:14:37 +0000	
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