Assignment 5 Reflection:

All of the requirements for Assignment 5 are complete. Most of the code for the positive integers program was types from scratch. A majority of the code for the auction program was used from the chapter 3 exercises, and modified to fit the Auction.java.

In the positive integers program, I used the Random function to generate 150 random numbers. I stored both even and odd numbers in a single array, but stored the even numbers starting at the beginning of the array, and the odd numbers starting at the end of the array.

For the auction program, I used the programs that I typed during the chapter 3 explaining how the StackedLists worked. Because of this, I really only had to develop 2 classes, Bidder and Auction. The bidder would store information on a bidder who took position in the auction. If a bidder bid below the max bid of the previous bidder, that bidder was not processed with the bidder class. The Auction class was the demo for the overall program.

DoubleIntegerStackDemo.java

There are 68 evens and 82 odds.

68 Eve	n number	s								
326	746	286	368	888	796	470	702	740	470	
692	452	442	570	666	548	500	268	734	618	
34	778	428	716	488	382	334	438	322	762	
626	132	672	366	550	536	30	834	654	966	
678	910	172	362	960	960	246	268	596	310	
726	958	784	926	314	142	522	632	878	548	
474	710	524	670	150	368	820	116			
82 Odd numbers										
875	73	171	583	23	869	305	705	605	481	
33	479	363	639	169	341	371	483	219	517	
125	821	767	367	339	449	367	299	869	939	
711	751	689	935	417	705	311	747	933	493	
889	577	747	683	73	3	271	343	293	543	
937	645	213	709	397	781	483	867	391	577	
257	651	395	555	557	395	971	5	305	577	
607		489	347	683	821	559	413	631	9	
917	11									
**** D	on 1 ava	n and Do	n 2 0dd	- ****						
	op 1 eve n number		op 2 Odd	s ****						
	op 1 eve n number		op 2 Odd:	s ****						
			op 2 Odd:	s **** 	 796	470	 702	 740	470	
67 Eve	n number	s 			796 548	470 500	702 268	740 734	470 618	
67 Eve 326	n number 746	s 286	368	888						
67 Eve 326 692	n number 746 452	s 286 442	368 570	888 666	548	500	268	734	618	
67 Eve 326 692 34	n number 746 452 778	286 442 428	368 570 716	888 666 488	548 382	500 334	268 438	734 322	618 762	
67 Eve 326 692 34 626 678 726	746 452 778 132 910 958	286 442 428 672 172 784	368 570 716 366 362 926	888 666 488 550 960 314	548 382 536 960 142	500 334 30 246 522	268 438 834 268	734 322 654	618 762 966	
67 Eve 326 692 34 626 678	746 452 778 132 910	5 286 442 428 672 172	368 570 716 366 362	888 666 488 550 960	548 382 536 960	500 334 30 246	268 438 834 268	734 322 654 596	618 762 966 310	
67 Eve 326 692 34 626 678 726 474	746 452 778 132 910 958	286 442 428 672 172 784 524	368 570 716 366 362 926	888 666 488 550 960 314	548 382 536 960 142	500 334 30 246 522	268 438 834 268	734 322 654 596	618 762 966 310	
67 Eve 326 692 34 626 678 726 474 80 Odd	746 452 778 132 910 958 710 numbers	286 442 428 672 172 784 524	368 570 716 366 362 926 670	888 666 488 550 960 314 150	548 382 536 960 142 368	500 334 30 246 522 820	268 438 834 268 632	734 322 654 596 878	618 762 966 310 548	
67 Eve 326 692 34 626 678 726 474 80 Odd 171	746 452 778 132 910 958 710	286 442 428 672 172 784 524	368 570 716 366 362 926	888 666 488 550 960 314 150	548 382 536 960 142 368	500 334 30 246 522 820	268 438 834 268	734 322 654 596 878	618 762 966 310 548	
67 Eve 326 692 34 626 678 726 474 80 Odd	746 452 778 132 910 958 710 numbers	286 442 428 672 172 784 524	368 570 716 366 362 926 670	888 666 488 550 960 314 150	548 382 536 960 142 368	500 334 30 246 522 820	268 438 834 268 632	734 322 654 596 878	618 762 966 310 548	
67 Eve 326 692 34 626 678 726 474 80 Odd 171 363	746 452 778 132 910 958 710 numbers 583 639	286 442 428 672 172 784 524	368 570 716 366 362 926 670 869 341 449	888 666 488 550 960 314 150	548 382 536 960 142 368 705 483	500 334 30 246 522 820 605 219	268 438 834 268 632 481 517	734 322 654 596 878	618 762 966 310 548 479 821	
67 Eve 326 692 34 626 678 726 474 80 Odd 171 363 767	746 452 778 132 910 958 710 numbers 583 639 367	286 442 428 672 172 784 524 23 169 339	368 570 716 366 362 926 670	888 666 488 550 960 314 150 305 371 367	548 382 536 960 142 368 705 483 299	500 334 30 246 522 820 605 219 869	268 438 834 268 632 481 517 939	734 322 654 596 878 33 125 711	618 762 966 310 548 	
67 Eve 326 692 34 626 678 726 474 80 Odd 171 363 767 689	n number 746 452 778 132 910 958 710 numbers 583 639 367 935	286 442 428 672 172 784 524 23 169 339 417	368 570 716 366 362 926 670 869 341 449 705	888 666 488 550 960 314 150 305 371 367 311	548 382 536 960 142 368 705 483 299 747	500 334 30 246 522 820 605 219 869 933	268 438 834 268 632 481 517 939 493	734 322 654 596 878 33 125 711 889	618 762 966 310 548 479 821 751 577	
67 Eve 326 692 34 626 678 726 474 80 Odd 171 363 767 689 747	n number 746 452 778 132 910 958 710 numbers 583 639 367 935 683	286 442 428 672 172 784 524 23 169 339 417 73	368 570 716 366 362 926 670 869 341 449 705 3	888 666 488 550 960 314 150 305 371 367 311 271	548 382 536 960 142 368 705 483 299 747 343	500 334 30 246 522 820 605 219 869 933 293	268 438 834 268 632 481 517 939 493 543	734 322 654 596 878 33 125 711 889 937	618 762 966 310 548 479 821 751 577 645	
67 Eve 326 692 34 626 678 726 474 80 Odd 171 363 767 689 747 213	n number 746 452 778 132 910 958 710 numbers 583 639 367 935 683 709	286 442 428 672 172 784 524 23 169 339 417 73 397	368 570 716 366 362 926 670 869 341 449 705 3 781	888 666 488 550 960 314 150 305 371 367 311 271 483	548 382 536 960 142 368 705 483 299 747 343 867	500 334 30 246 522 820 605 219 869 933 293 391	268 438 834 268 632 481 517 939 493 543 577	734 322 654 596 878 33 125 711 889 937 257	618 762 966 310 548 479 821 751 577 645 651	

**** Getters ****
Even Head: 116
Odd Head: 73

Auction.java

```
* * *Welcome to the Auction!* * *
-----
Please enter bidder's name: John
Enter a bid: 7
                                     High Bidder High Bid
                                                               Maximum Bid
New Bid
               Result
             New High Bidder
                                     John
7 John
Enter a new bidder(y/n)? y
-----
Please enter bidder's name: Hank
Enter a bid: 5
              Result High Bidder High Bid
New High Bidder John 1
High Bid Inc. John 5
New Bid
                                                                    Maximum Bid
7 John
Enter a new bidder(y/n)? y
-----
Please enter bidder's name: Jill
Enter a bid: 10
New Bid Result High Bidder
7 John New High Bidder John
5 Hank High Bid Inc. John
10 Jill New High Bidder Jill
                                                  High Bid
                                                                    Maximum Bid
                                                     1
                                                     5
                                                    8
                                                                     10
Enter a new bidder(y/n)? y
Please enter bidder's name: Thad
Enter a bid: 8
        Result High Bidder High Bid
New High Bidder John 1
High Bid Inc. John 5
New High Bidder Jill 8
No Change Jill
New Bid
                                                                   Maximum Bid
7 John
5 Hank
10 Jill
                                                                    10
8 Thad
                                                                    10
Enter a new bidder(y/n)? y
-----
Please enter bidder's name: Joey
Enter a bid: 15
                                   High Bidder Hi
John 1
John 5
New Bid
                                                    High Bid
              Result
                                                                    Maximum Bid
                               John
Jill
Jill
             New High Bidder
7 John
5 Hank
             High Bid Inc.
10 Jill New High Bidder Jill 8
8 Thad No Change Jill 8
15 Joey New High Bidder Joey 11
                                                  8
8
                                                                    10
                                                                    10
                                                                    15
Enter a new bidder(y/n)? n
***The Auction is Over. Here are the results. The winner is on top.
Bidder Bid
Joey 11
Jill
       8
John
John
      1
Thank you for using auction.
```

Assignment3Project Junit Testing

Methods to Test	Test Cases	Expected Result	Actual Result
	Test Case 1	Add member with bid	Member is not added to
		below current bid and max	history
	Test Case 2	Add member with bid	Current bid is raised for
Do{}While		below max	current max
Dotywine		but above current bid	bidder
	Test Case 3	Add member	Member is set
		with bid	to highest
		above max	bidder,
		bid	current bid is
			raised

- The easiest way to check the Positive Integer program was to generate random numbers and check to make sure that the even numbers and odd numbers were sorted properly.
- The Auction program was tested as follows:
 - The main part of the program was a do{} while that processed one bid and then additional bids as the user chose
 - The first test was to add a member that had a bid below the max bid of the previous user, and also below the current bid
 - The result: The member was printed to the summary of bids, but was not printed in the history, as they did not affect the actual bidding process
 - The second test was to add a member that bid above the current bid, but not above the max bid
 - The result: The member was printed to summary of bids, and the current high bidder had their current bid upped to the new the bid
 - The last test was to add a member that bid above the max
 - The result: The member was added to the history of bids, and was also updated to the highest bidder