

**Review team:**

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Ripple effect column is to indicate whether or not code outside the class will be affected by the change.

**Code file: Auction.java**

Method and Location / Row(s)	Type of code smell	Brief description to guide someone to a fix	Ripple Effect? (Y/N)
<b>Auction() and Line 22 to 29</b>	A method is too long	Make a another method to validate the input for auction. → <code>auctionInputValidator()</code>	N
<b>getStatus() and Line 85</b> <b>auctionBidTotal() and Line 102</b>	Code is duplicated	Make a common function to get a total amount for bids. → <code>getAllBids()</code>	N
<b>getStatus() and Line 95</b>	Unnecessary comments	Delete that comment as the below line is self explanatory.	N
<b>auctionInputValidator()</b>	If statement had very long condtion	Make if statement into separate boolean checks.	N
<b>Auction() and Line 27</b> <b>openAuction() and Line 50 and 51</b> <b>closeAuction() and Line 61 and 62</b> <b>getStatus() and Line 97</b> <b>auctionIsOpen() and Line 119</b> <b>auctionIsClosed() and Line 122</b>	Magic Number	It uses numbers to represent the state of the auction, but this practice is not considered good and results in poor readability. Therefore, we will create an enum variable to represent the state of the auction instead.  Note: Change the type of “naming” variable. Before: <code>HashMap&lt;Integer, String&gt;</code> After: <code>HashMap&lt;State, String&gt;</code>  → State is an enum.	N
<b>Line 7, 8, 9, 10, 14 and 15</b>	Inconsistent naming of variables	Using the variable name same throughout the entire project leads to an increase in code readability.	N

**Code file: Bidder.java**

Method and Location / Row(s)	Type of code smell	Brief description to guide someone to a fix	Ripple Effect? (Y/N)
<b>Line 5 and 9</b>	Inconsistent naming of variable	Change the name from bidderNumber to bidderID and lotsSet to lots.	N

**Code file: Lot.java**

Method and Location / Row(s)	Type of code smell	Brief description to guide someone to a fix	Ripple Effect? (Y/N)
<b>Line 7, 8, 9, and 10</b>	Global variables are public	Make it private so that only that class will be able to access that variable.	N
<b>Line 18</b>	Inconsistent naming of variable	Change the name from theAuction to auction.	N
<b>Line 57</b>	Repetition of comment.	Delete the unnecessary comment.	N
<b>placeBid() and Line 59 to 68</b>	Method is too long	Separate the logic of validation for bidder. → isValidBidder	N
<b>placeBid() and Line 79 to 94</b>	Method is too long	Separate the logic of submitting the bit. → submitBid	N

**Code file: OnlineAuctionSystem.java**

Method and Location / Row(s)	Type of code smell	Brief description to guide someone to a fix	Ripple Effect? (Y/N)
<b>Line 7, 8 and 9</b>	Global variables had default access modifiers.	Make them private	N
<b>createAuction() and Line 24 to 33</b>	Method is too long	Separate the logic to check that lot lies in appropriate range. → checkLotRange()	N
<b>createAuction() and Line 39 to 45</b>	Method is too long	Separate the logic to start the auction. → initiateAuction()	N

Code file: TestHarness.java

Method and Location / Row(s)	Type of code smell	Brief description to guide someone to a fix	Ripple Effect? (Y/N)
Line 7 to 16	Unnecessary global variable were used.	Convert the user input into UPPER CASE and then compare.	N
main()	Method is too long	<ol style="list-style-type: none"><li>1) Replace if-else to switch-case</li><li>2) Create a separate method for each case.</li><li>3) Set the onlineAuctionSystem as global so that methods made in step 2 can easily access.</li></ol>	N