Project: Shopping App
Report date: 1 June, 2021
Prepared by: Michael Allen

Current Status

Shopping App **is NOT** ready for release.

Blocking defects

Work Item ID	Description	Status
testWeakRobust	Passing a cart with no state given to the program does not check the passed value and crashes the app, throwing a NullPointerException, rather than not allowing invalid input through an IllegalArgumentException.	New
TotalCostBoundaryTests	The entire functionality of TotalCostCalculator is incorrect, as it calculates tax against shipping, when tax should be calculated and added before adding shipping.	New
testNominalWI_nextday	Any time the cart's initial cost is over 50$, all shipping becomes free, even though NEXT_DAY shipping should never be free no matter the initial cost.	New
pmd_PurchaseAgent.save()	PurchaseAgent's save method uses .equals() to check if the Purchase is null. By doing this, if we try to save the purchase we will get a NullPointerException and crash the program.	New

(add more rows if needed

Significant non-blocking defects

Work Item ID	Description	Status
pmd_Purchase.toString()	The Purchase class has a toString() method that builds a string of the purchase information. However,	New

	an @Override will be required in order for this to work properly and not use Java's toString() method.	
pmd_shortUsage	In the PurchaseAgent class, a short is used when making calculations. This will cause a negative performance impact and slow down the ShoppingApp slightly.	New

(add more rows if needed

Supporting information

Add other notes here

Testing process

Description	Test count	Pass %
TotalCostBoundaryTests : Uses boundary testing to test the TotalCostCalculator functionality	20	50%
MockTests : Using Mockito, this file tests the functionality of PurchaseDBO and PurchaseAgent, without actually modifying the database.	4	100%
EquivalencePartitionTests : Using strong normal cases and weak robust cases, this file tests the TotalCostCalculator's functionality with invalid values and valid values.	9	33.3%

Test coverage

module name	line coverage	branch cov
PurchaseAgent	92%	83%
TaxCalculator	93%	100%
TotalCostCalculator	100%	100%
ShoppingCart	82%	100%
PurchaseItem	58%	n/a
Purchase	54%	n/a
PurchaseDBO	0%	n/a
Bill	100%	n/a