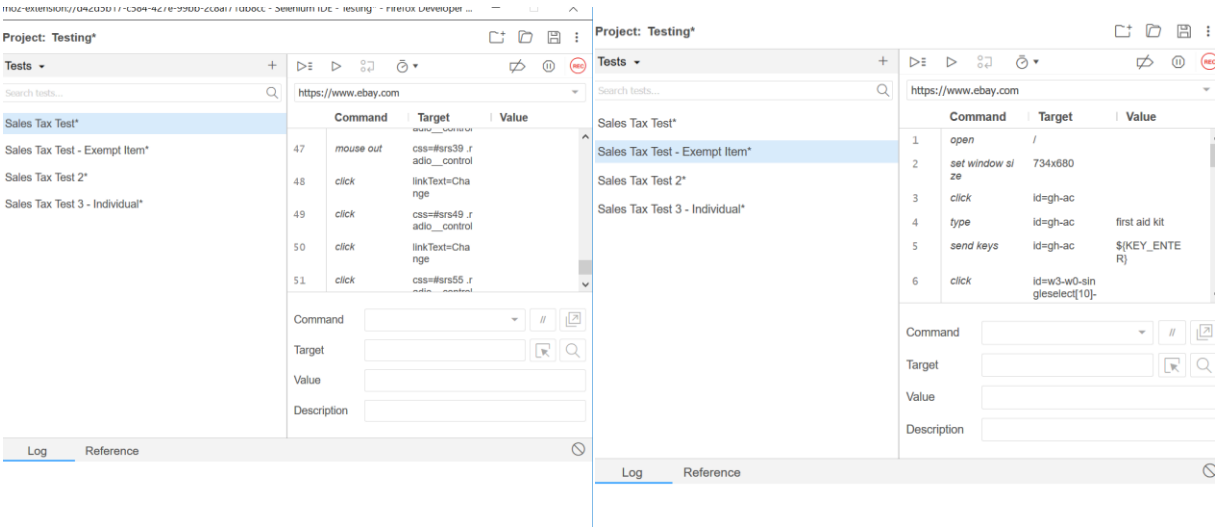
Software Testing Portfolio

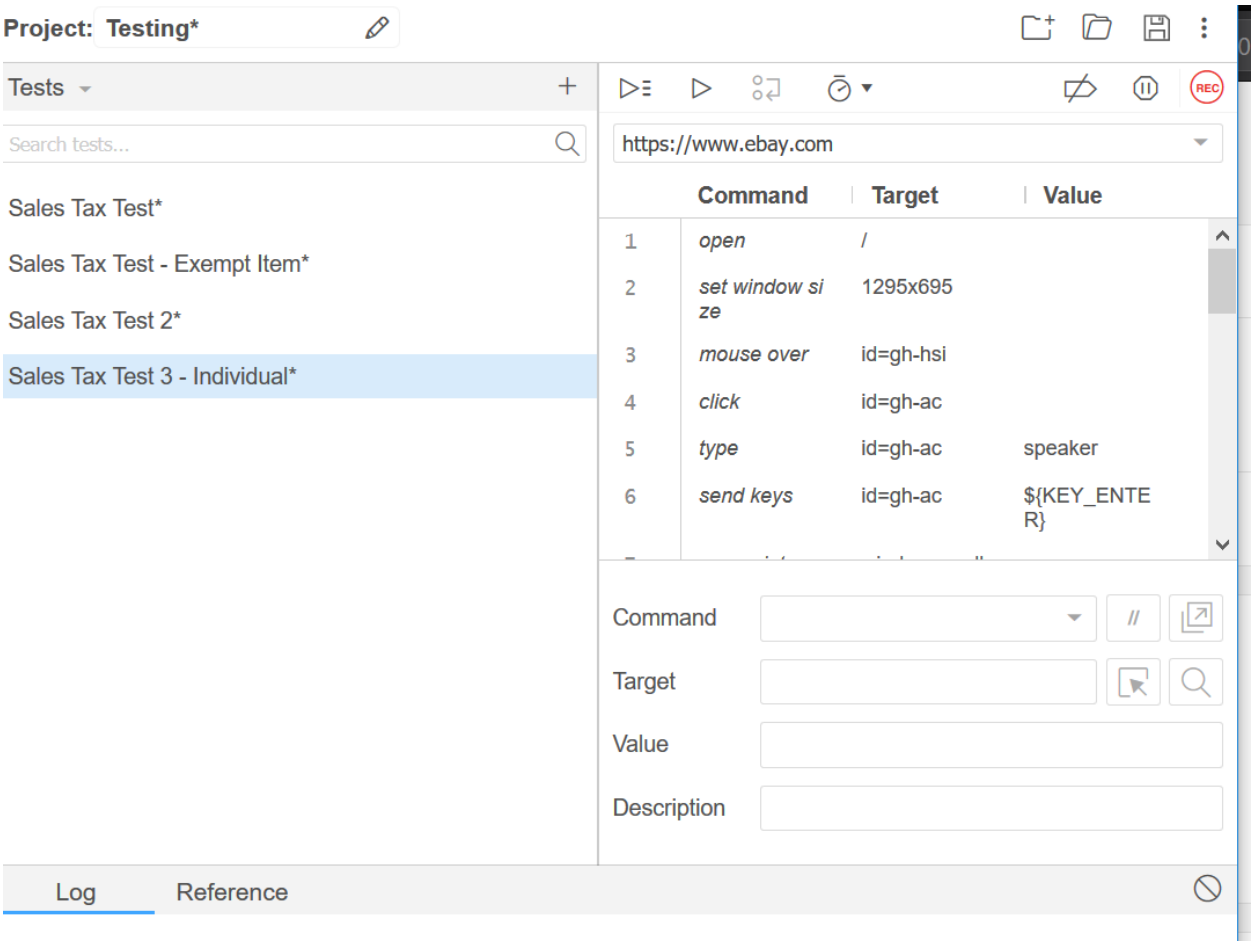
Han Lee

Ebay’s Sales Tax Calculator

Automated Testing Plan

The tester would apply automated testing using Selenium to record some of the test cases.





The tester would apply automated testing using Excel Formulas. The sales tax calculation of each test with different tax rate based on different counties can be cumbersome. Hence,

the tester obtained the relational dataset of zipcode and the county and another dataset of county and surtax rate. The tester used vlookup function to look up surtax rate based on county to combine the two datasets. Then, the tester used the combined relational dataset to setup a column that generates the tax rate when the zipcode is entered. Thus, the tester only entered the subtotal amount, sales tax collected amount and zip code. When these three inputs are entered, the pre-set-up columns determined whether it charged the sales tax with correct sales tax rate based on county.

Screenshot of the tester's relational dataset that the tester used as lookup table.

	Zip Code	Zip Code	City	County	City	County	Tax Rate
ZIP Code 32003	32003	32003	Fleming Island	Clay	Fleming Island	Clay	0.07
ZIP Code 32004	32004	32004	Ponte Vedra Beach	Saint Johns	Ponte Vedra Beach	Saint Johns	0.065
ZIP Code 32006	32006	32006	Fleming Island	Clay	Fleming Island	Clay	0.07
ZIP Code 32007	32007	32007	Bostwick	Putnam	Bostwick	Putnam	0.07
ZIP Code 32008	32008	32008	Branford	Suwannee	Branford	Suwannee	0.07
ZIP Code 32009	32009	32009	Bryceville	Nassau	Bryceville	Nassau	0.07
ZIP Code 32011	32011	32011	Callahan	Nassau	Callahan	Nassau	0.07
ZIP Code 32013	32013	32013	Day	Lafayette	Day	Lafayette	0.07
ZIP Code 32024	32024	32024	Lake City	Columbia	Lake City	Columbia	0.07
ZIP Code 32025	32025	32025	Lake City	Columbia	Lake City	Columbia	0.07
ZIP Code 32026	32026	32026	Raiford	Union	Raiford	Union	0.07
ZIP Code 32030	32030	32030	Doctors Inlet	Clay	Doctors Inlet	Clay	0.07
ZIP Code 32033	32033	32033	Elkton	Saint Johns	Elkton	Saint Johns	0.065
ZIP Code 32034	32034	32034	Fernandina Beach	Nassau	Fernandina Beach	Nassau	0.07
ZIP Code 32035	32035	32035	Fernandina Beach	Nassau	Fernandina Beach	Nassau	0.07
ZIP Code 32038	32038	32038	Fort White	Columbia	Fort White	Columbia	0.07
ZIP Code 32040	32040	32040	Glen Saint Mary	Baker	Glen Saint Mary	Baker	0.07
ZIP Code 32041	32041	32041	Yulee	Nassau	Yulee	Nassau	0.07
ZIP Code 32042	32042	32042	Graham	Bradford	Graham	Bradford	0.07
ZIP Code 32043	32043	32043	Green Cove Springs	Clay	Green Cove Springs	Clay	0.07

Zip Code Database | Sheet2 | Testing

Screenshot of the Test PTFL0001 with the automated calculation of pre-set formulas. (Column A,B,D and H were manually entered.)

Subtotal	Sales Tax	Correct Tax	Zip Code	Seller	Computed Sales Tax Rate	Correct Sales Tax Rate	Testing Result
$ 21.29	$ 1.81	1.81	33569	7thavenuestore	8.5%	8.5%	Pass
$ 21.29	$ 1.81	1.70	32334	7thavenuestore	8.5%	8.0%	Fail
$ 21.29	$ 1.81	1.60	32424	7thavenuestore	8.5%	7.5%	Fail
$ 21.29	$ 1.81	1.49	32611	7thavenuestore	8.5%	7.0%	Fail
$ 21.29	$ 1.81	1.38	33901	7thavenuestore	8.5%	6.5%	Fail
$ 21.29	$ 1.81	1.28	34428	7thavenuestore	8.5%	6.0%	Fail

FUNCTIONAL TEST CASE REPORTING FORM

Test Case ID	PTFL0001
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay calculates the correct sales tax amount with respect to the Florida sales tax rate that depends on which county.
Functional Test Type	Equivalence Class Testing
Pre-Conditions	The mail order sale should be charged with sales tax when the seller, who has a nexus within the state of Florida, sells products to Florida address. Florida has 67 counties where the sales tax rate ranges from 6% to 8.5%. The zip code 33569 is Hillsborough county with the sales tax rate of 8.5% and represents 1 county of Hillsborough County with the same tax rate of 8.5%. The zip code 32334 is Liberty County and represents Liberty County with the same tax rate of 8%. The zip code 32424 is Calhoun County and represents the following counties with the same tax rate of 7.5%; calhoun, desoto, escambia, gadsden, highlands, jackson, leon, madison, monroe, osceola, Washington. . The zip code 32611 is Alachua County and represents the following counties with the tax rate of 7%; Alachua, baker, bay, bradford, brevard, broward, charlotte, clay, collier, columbia, dixie, duval, flagler, franklin, gilchrist, glades, gulf, hamilton, hardee, hendry, holmes, indian river, jefferson, lafayette, lake, levy, manatee, marion, miami-dade, nassau, okeechobee, palm beach, pasco, pinellas, polk, putnam, saint lucie, santa rosa, sarasota, seminole, sumter, suwannee, taylor, union, wakulla, walton, st lucie The zip code 33901 is Lee County and represents the following counties with the 6.5% tax rate; hernando, lee, martin, orange, okaloosa, saint johns, volusia, st johns The zip code 34428 is Citrus County and represents the Citrus county with 6% tax rate.
Inputs	(Subtotal, Zip Code, Item, Seller) (21.29, 33569, Costume, 7thavenuestore) (21.29, 32334, Costume, 7thavenuestore) (21.29, 32424, Costume, 7thavenuestore) (21.29, 32611, Costume, 7thavenuestore) (21.29, 33901, Costume, 7thavenuestore) (21.29, 34428, Costume, 7thavenuestore)
Expected Outputs	1.81 1.70 1.60

	1.49 1.38 1.28
Post-Conditions	The Checkout Shopping Cart software of Ebay computes the sales tax amount when the tester changes the shipping address.
Execution History	

Date	Result	Tester
4/24/2019	1.81/Pass	Han Lee
4/24/2019	1.81/Fail	Han Lee
4/24/2019	1.81/Fail	Han Lee
4/24/2019	1.81/Fail	Han Lee
4/24/2019	1.81/Fail	Han Lee
4/24/2019	1.81/Fail	Han Lee

Test Case ID	PTFL0002
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay calculates the correct sales tax amount with respect to the Florida sales tax rate that depends on which county.
Functional Test Type	Equivalence Class Testing with respect to 6 counties that represent each county that has each of the sales tax rate of 6%, 6.5%, 7%, 7.5%, 8% and 8.5%. Scenario Based Testing with the scenario that if a seller is a big guy as "Adidas", then, the sales tax would be calculated correctly on Ebay
Pre-Conditions	The mail order sale should be charged with sales tax when the seller, who has a nexus within the state of Florida, sells products to Florida address. Florida has 67 counties where the sales tax rate ranges from 6% to 8.5%. The zip code 33569 is Hillsborough county with the sales tax rate of 8.5% and represents 1 county of Hillsborough County with the same tax rate of 8.5%. The zip code 32334 is Liberty County and represents Liberty County with the same tax rate of 8%. The zip code 32424 is Calhoun County and represents the following counties with the same tax rate of 7.5%; calhoun, desoto, escambia, gadsden, highlands, jackson, leon, madison, monroe, osceola, Washington. . The zip code 32611 is Alachua County and represents the following counties with the tax rate of 7%; Alachua, baker, bay, bradford, brevard, broward, charlotte, clay, collier, columbia, dixie, duval, flagler, franklin, gilchrist, glades, gulf, hamilton, hardee, hendry, holmes, indian river, jefferson, lafayette, lake, levy, manatee, marion, miami-dade, nassau, okeechobee, palm beach, pasco, pinellas, polk, putnam, saint lucie, santa rosa, sarasota, seminole, sumter, suwannee, taylor, union, wakulla, walton, st lucie The zip code 33901 is Lee County and represents the following counties with the 6.5% tax rate;

	hernando, lee, martin, orange, okaloosa, saint johns, volusia, st johns The zip code 34428 is Citrus County and represents the Citrus county with 6% tax rate.
Inputs	(Subtotal, Zip Code, Item, Seller) (49.99, 33569, shoes, Adidas) (49.99, 32334, shoes, Adidas) (49.99, 32424, shoes, Adidas) (49.99, 32611, shoes, Adidas) (49.99, 33901, shoes, Adidas) (49.99, 34428, shoes, Adidas)
Expected Outputs	4.25 4.00 3.75 3.50 3.25 3.00
Post-Conditions	The Checkout Shopping Cart software of Ebay computes the sales tax amount when the tester changes the shipping address.
Execution History	

Date	Result	Tester
4/24/2019	4.25/Pass	Han Lee
4/24/2019	4.00/Pass	Han Lee
4/24/2019	3.75/Pass	Han Lee
4/24/2019	3.50/Pass	Han Lee
4/24/2019	3.25/Pass	Han Lee
4/24/2019	3.00/Pass	Han Lee

Test Case ID	PTFL0003
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay calculates the correct sales tax amount with respect to the Florida sales tax rate that depends on which county.
Functional Test Type	Equivalence Class Testing with respect to 6 counties that represent each county that has each of the sales tax rate of 6%, 6.5%, 7%, 7.5%, 8% and 8.5%. Scenario Based Testing with the scenario that if a seller is an individual seller rather than a merchant seller; then, the sales tax would not be calculated correctly on Ebay.
Pre-Conditions	The mail order sale should be charged with sales tax when the seller, who has a nexus within the state of Florida, sells products to Florida address. Florida has 67 counties where the sales tax rate ranges from 6% to 8.5%. The zip code 33569 is Hillsborough county with the sales tax rate of 8.5% and represents 1 county of Hillsborough County with the same tax rate of 8.5%. The zip code 32334 is Liberty County and represents Liberty County with the same tax rate of 8%. The zip code 32424 is Calhoun County and represents the following counties with the same tax rate of 7.5%; calhoun, desoto, escambia, gadsden, highlands, jackson, leon, madison, monroe, osceola, Washington. . The zip code 32611 is Alachua County and represents the following counties with the tax rate of 7%; Alachua, baker, bay, bradford, brevard, broward, charlotte, clay, collier, columbia, dixie, duval, flagler, franklin, gilchrist, glades, gulf, hamilton, hardee, hendry, holmes, indian river, jefferson, lafayette, lake, levy, manatee, marion, miami-dade, nassau, okeechobee, palm beach, pasco, pinellas, polk, putnam, saint lucie, santa rosa, sarasota, seminole, sumter, suwannee, taylor, union, wakulla, walton, st lucie The zip code 33901 is Lee County and represents the following counties with the 6.5% tax rate; hernando, lee, martin, orange, okaloosa, saint johns, volusia, st johns The zip code 34428 is Citrus County and represents the Citrus county with 6% tax rate. Testing PTFL0001 showed that the correct sales tax has not been charged with one merchant seller. Testing PTFL0002 showed that the correct sales tax has been charged with one globally-recognized reputable seller. Thus, the tester came up with a scenario whereas Ebay's Sales Tax Calculator would deviate from collecting the correct amount of sales tax when the seller is a small individual seller.
Inputs	(Subtotal, Zip Code, Item, Seller) (5, 33569, Clothes, Individual) (5, 32334, Clothes, Individual) (5, 32424, Clothes, Individual) (5, 32611, Clothes, Individual)

	(5, 33901, Clothes, Individual) (5, 34428, Clothes, Individual)
Expected Outputs	0.43 0.40 0.38 0.35 0.33 0.30
Post-Conditions	The Checkout Shopping Cart software of Ebay does not charge any sales tax amount when the seller is a small individual seller.
Execution History	

Date	Result	Tester
4/24/2019	0.00/Fail	Han Lee
4/24/2019	0.00/Fail	Han Lee
4/24/2019	0.00/Fail	Han Lee
4/24/2019	0.00/Fail	Han Lee
4/24/2019	0.00/Fail	Han Lee
4/24/2019	0.00/Fail	Han Lee

Test Case ID	PTFL0004
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay checks the validity of the shipping address with respect to city name.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay has a database of city name and zip code and that the software checks the validity of city name with respect to zip code and rejects the invalid city name.
Pre-Conditions	City name Hosford has a zip code of 32334.
Inputs	(City, Zip Code) (Hosfort, 32334)
Expected Outputs	Invalid Address
Post-Conditions	The Checkout Shopping Cart software of Ebay should display a message that the address is invalid

Execution History	

Date	Result	Tester
4/24/2019	Invalid Address/Pass	Han Lee

Test Case ID	PTFL0005
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay checks the validity of the shipping address with respect to State.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay has a database of State name and zip code and that the software checks the validity of State name with respect to zip code and rejects the invalid State name.
Pre-Conditions	State of Georgia does not have a zip code of 32334, which is Florida Zip code.
Inputs	(State, Zip Code) (Georgia, 32334)
Expected Outputs	Invalid Address
Post-Conditions	The Checkout Shopping Cart software of Ebay should display a message that the address is invalid
Execution History	

Date	Result	Tester
4/24/2019	Invalid Address/Pass	Han Lee

Test Case ID	PTFL0006
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay checks the validity of the shipping address with respect to the street address.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay has a database of street address with respect to the city, state and zip code and checks the validity of the street address.
Pre-Conditions	Previous Tests PTFL0004, 0005 shows that the Ebay's checkout software has a database of city, state and zip code. Through this test, we will see if the software has a database of street address by entering the correct city, state and zip code but incorrect street address.
Inputs	(Street Address, City, State, Zip Code)

	(noexist Road, Hosford, Florida, 32334)
Expected Outputs	Invalid Street Address
Post-Conditions	The Checkout Shopping Cart software of Ebay should display a message that the address is invalid
Execution History	

Date	Result	Tester
4/24/2019	Invalid Street Address/Pass	Han Lee

Test Case ID	PTFL0007
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay properly does not charge sales tax for Florida seller (who does not have nexus in Georgia)to a shipping address in Georgia.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay properly does not charge sales tax for Florida seller (who does not have nexus in Georgia)to a shipping address in Georgia.
Pre-Conditions	Previous Tests PTFL0004, 0005 shows that the Ebay's checkout software has a database of city, state and zip code. Through this test, we will see if the software has a database of street address by entering the correct city, state and zip code but incorrect street address.
Inputs	(Subtotal, Street Address, City, State, Zip Code) ($21.29, 225 Baker St NW, Atlanta, GA, 30313)
Expected Outputs	$0.00
Post-Conditions	The Checkout Shopping Cart software of Ebay should update the sales tax to 0.
Execution History	

Date	Result	Tester
4/24/2019	Updated Sales tax of $0.00/Pass	Han Lee

Test Case ID	PTFL0008
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay properly does not charge sales tax for Florida seller for an exempt-to-sales-tax item.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay properly does not charge sales tax for Items that are not subject to Florida sales tax.
Pre-Conditions	In the state of Florida, the medical item such as First Aid Kit is not subject to sales tax.
Inputs	(Item, subtotal, Street Address, City, State, Zip Code) (First Aid Kit, $34.74, 16827, Hosford, Florida, 32334)
Expected Outputs	$0.00
Post-Conditions	The Checkout Shopping Cart software of Ebay should update the sales tax to 0.
Execution History	

Date	Result	Tester
4/24/2019	Updated Sales tax of $0.00/Pass	Han Lee

Test Case ID	PTFL0009
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay properly rounds the Florida sales tax amount with respect to DR-2X, rounding bracket set by the state of Florida.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay does not charge sales tax for Florida seller per rounding set by the state of Florida in DR-2X, when the seller is a regular merchant.
Pre-Conditions	The rounding of sales tax exists because sometimes, for example, 7% of $0.50, is 3.5 cents, which should be rounded down to 3 cents or rounded up to 4 cents, as the smallest U.S currency is a hundredth of a dollar, which is a cent. That means, a cent can not be broken into 2 pieces to account for 0.5 cent. The state of Florida set the rounding bracket system in DR-2X Form.
Inputs	(Subtotal, Zip Code, Item, Seller) (21.69, 33569, Costume, 7thavenuestore) (43.38, 33569, Costume, 7thavenuestore) (65.07, 33569, Costume, 7thavenuestore) (86.76, 33569, Costume, 7thavenuestore) (108.45, 33569, Costume, 7thavenuestore) (130.14, 33569, Costume, 7thavenuestore) (151.83, 33569, Costume, 7thavenuestore) (173.52, 33569, Costume, 7thavenuestore)
Expected Outputs	$1.85, $3.69, $5.54, $7.38 $9.22, $11.07, $12.91, $14.75
Post-Conditions	The Checkout Shopping Cart software of Ebay should update the sales tax accordingly.
Execution History	

Date	Result	Tester
4/24/2019	$1.84/Fail	Han Lee
4/24/2019	$3.69/Pass	Han Lee
4/24/2019	$5.53/Fail	Han Lee
4/24/2019	$7.37/Fail	Han Lee
4/24/2019	$9.22/Pass	Han Lee
4/24/2019	$11.06/Fail	Han Lee
4/24/2019	$12.91/Pass	Han Lee
4/24/2019	$14.75/Pass	Han Lee

Test Case ID	PTFL0010
Component	Ebay's Sales Tax Calculator in the Checkout software
Purpose of Test Case	To see if the Ebay properly rounds the Florida sales tax amount with respect to DR-2X, rounding bracket set by the state of Florida.
Functional Test Type	Scenario Based Testing with the scenario that the checkout software of Ebay does not charge sales tax for Florida seller per rounding set by the state of Florida in DR-2X, when the seller is a globally recognized merchant, like Adidas.
Pre-Conditions	The rounding of sales tax exists because sometimes, for example, 7% of $0.50, is 3.5 cents, which should be rounded down to 3 cents or rounded up to 4 cents, as the smallest U.S currency is a hundredth of a dollar, which is a cent. That means, a cent can not be broken into 2 pieces to account for 0.5 cent. The state of Florida set the rounding bracket system in DR-2X Form.
Inputs	(Subtotal, Zip Code, Item, Seller) (4649.07, 32611, shoes, Adidas) (4399.12, 32611, shoes, Adidas) (3999.2, 32611, shoes, Adidas) (3499.3, 32611, shoes, Adidas) (2749.45, 32611, shoes, Adidas) (1499.7, 32611, shoes, Adidas) (999.8, 32611, shoes, Adidas) (499.9, 32611, shoes, Adidas)
Expected Outputs	325.43, 307.94, 279.95, 244.96, 192.47, 104.98, 69.99, 35
Post-Conditions	The Checkout Shopping Cart software of Ebay should update the sales tax accordingly.
Execution History	

Date	Result	Tester
4/24/2019	$325.43/Pass	Han Lee
4/24/2019	$307.94/Pass	Han Lee
4/24/2019	$279.95/Pass	Han Lee
4/24/2019	$244.96/Pass	Han Lee
4/24/2019	$192.47/Pass	Han Lee
4/24/2019	$104.98/Pass	Han Lee
4/24/2019	$69.99/Pass	Han Lee
4/24/2019	$35/Pass	Han Lee

STRUCTURAL TEST CASE FORM

Algorithm for Sub Tax Bracket for integer % (eg: 7%)

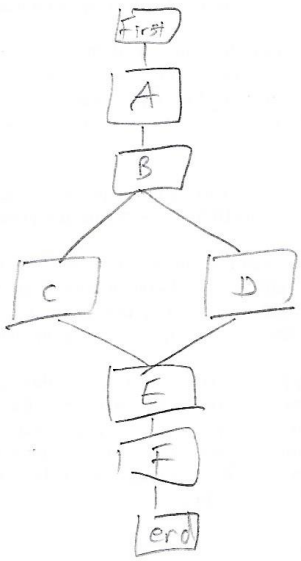
```
1. begin
2. double x
   double y = roundown(x)
   double a = x-y
   double b = x*z
   int z = 7%
3. input (x,z)
4 If (a>.10)
5     roundup(b,2)
6 else
7     rounddown(b,2)
8 endif
9 output (b)
10 end
```

x: subtotal
y: round down of subtotal
Integer portion of subtotal
z: tax rate

a: decimal portion of taxable
b: tax

A : 1,2,3,4
B : 4
C : 5,6
D : 7,8
E : 9
F : 10

DD Path Graph



Nodes	DD Path
1,2,3	A
4	B
5,6	C
7,8	D
9	E
10	F

FLORIDA DEPARTMENT OF REVENUE

Common Sales Tax Brackets

Additional sales tax brackets can be found on our website at **floridarevenue.com/taxes/rates.**

6% (General Sales Tax Rate Only)

Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax
.10 - .16	.01	2.10 - 2.16	.13	4.10 - 4.16	.25	6.10 - 6.16	.37	8.10 - 8.16	.49	10.10 - 10.16	.61
.17 - .33	.02	2.17 - 2.33	.14	4.17 - 4.33	.26	6.17 - 6.33	.38	8.17 - 8.33	.50	10.17 - 10.33	.62
.34 - .50	.03	2.34 - 2.50	.15	4.34 - 4.50	.27	6.34 - 6.50	.39	8.34 - 8.50	.51	10.34 - 10.50	.63
.51 - .66	.04	2.51 - 2.66	.16	4.51 - 4.66	.28	6.51 - 6.66	.40	8.51 - 8.66	.52	10.51 - 10.66	.64
.67 - .83	.05	2.67 - 2.83	.17	4.67 - 4.83	.29	6.67 - 6.83	.41	8.67 - 8.83	.53	10.67 - 10.83	.65
.84 - 1.09	.06	2.84 - 3.09	.18	4.84 - 5.09	.30	6.84 - 7.09	.42	8.84 - 9.09	.54	10.84 - 11.09	.66
1.10 - 1.16	.07	3.10 - 3.16	.19	5.10 - 5.16	.31	7.10 - 7.16	.43	9.10 - 9.16	.55	11.10 - 11.16	.67
1.17 - 1.33	.08	3.17 - 3.33	.20	5.17 - 5.33	.32	7.17 - 7.33	.44	9.17 - 9.33	.56	11.17 - 11.33	.68
1.34 - 1.50	.09	3.34 - 3.50	.21	5.34 - 5.50	.33	7.34 - 7.50	.45	9.34 - 9.50	.57	11.34 - 11.50	.69
1.51 - 1.66	.10	3.51 - 3.66	.22	5.51 - 5.66	.34	7.51 - 7.66	.46	9.51 - 9.66	.58	11.51 - 11.66	.70
1.67 - 1.83	.11	3.67 - 3.83	.23	5.67 - 5.83	.35	7.67 - 7.83	.47	9.67 - 9.83	.59	11.67 - 11.83	.71
1.84 - 2.09	.12	3.84 - 4.09	.24	5.84 - 6.09	.36	7.84 - 8.09	.48	9.84 - 10.09	.60	11.84 - 12.09	.72

6.5% (Combined 6% General Sales Tax Rate Plus 0.5% Discretionary Sales Surtax Rate)

Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax
.10 - .15	.01	2.10 - 2.15	.14	4.10 - 4.15	.27	6.10 - 6.15	.40	8.10 - 8.15	.53	10.10 - 10.15	.66
.16 - .30	.02	2.16 - 2.30	.15	4.16 - 4.30	.28	6.16 - 6.30	.41	8.16 - 8.30	.54	10.16 - 10.30	.67
.31 - .46	.03	2.31 - 2.46	.16	4.31 - 4.46	.29	6.31 - 6.46	.42	8.31 - 8.46	.55	10.31 - 10.46	.68
.47 - .61	.04	2.47 - 2.61	.17	4.47 - 4.61	.30	6.47 - 6.61	.43	8.47 - 8.61	.56	10.47 - 10.61	.69
.62 - .76	.05	2.62 - 2.76	.18	4.62 - 4.76	.31	6.62 - 6.76	.44	8.62 - 8.76	.57	10.62 - 10.76	.70
.77 - .92	.06	2.77 - 2.92	.19	4.77 - 4.92	.32	6.77 - 6.92	.45	8.77 - 8.92	.58	10.77 - 10.92	.71
.93 - 1.07	.07	2.93 - 3.07	.20	4.93 - 5.07	.33	6.93 - 7.07	.46	8.93 - 9.07	.59	10.93 - 11.07	.72
1.08 - 1.23	.08	3.08 - 3.23	.21	5.08 - 5.23	.34	7.08 - 7.23	.47	9.08 - 9.23	.60	11.08 - 11.23	.73
1.24 - 1.38	.09	3.24 - 3.38	.22	5.24 - 5.38	.35	7.24 - 7.38	.48	9.24 - 9.38	.61	11.24 - 11.38	.74
1.39 - 1.53	.10	3.39 - 3.53	.23	5.39 - 5.53	.36	7.39 - 7.53	.49	9.39 - 9.53	.62	11.39 - 11.53	.75
1.54 - 1.69	.11	3.54 - 3.69	.24	5.54 - 5.69	.37	7.54 - 7.69	.50	9.54 - 9.69	.63	11.54 - 11.69	.76
1.70 - 1.84	.12	3.70 - 3.84	.25	5.70 - 5.84	.38	7.70 - 7.84	.51	9.70 - 9.84	.64	11.70 - 11.84	.77
1.85 - 2.09	.13	3.85 - 4.09	.26	5.85 - 6.09	.39	7.85 - 8.09	.52	9.85 - 10.09	.65	11.85 - 12.09	.78

7% (Combined 6% General Sales Tax Rate Plus 1% Discretionary Sales Surtax Rate)

Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax	Amount of Sale	Tax
.10 - .14	.01	2.10 - 2.14	.15	4.10 - 4.14	.29	6.10 - 6.14	.43	8.10 - 8.14	.57	10.10 - 10.14	.71
.15 - .28	.02	2.15 - 2.28	.16	4.15 - 4.28	.30	6.15 - 6.28	.44	8.15 - 8.28	.58	10.15 - 10.28	.72
.29 - .42	.03	2.29 - 2.42	.17	4.29 - 4.42	.31	6.29 - 6.42	.45	8.29 - 8.42	.59	10.29 - 10.42	.73
.43 - .57	.04	2.43 - 2.57	.18	4.43 - 4.57	.32	6.43 - 6.57	.46	8.43 - 8.57	.60	10.43 - 10.57	.74
.58 - .71	.05	2.58 - 2.71	.19	4.58 - 4.71	.33	6.58 - 6.71	.47	8.58 - 8.71	.61	10.58 - 10.71	.75
.72 - .85	.06	2.72 - 2.85	.20	4.72 - 4.85	.34	6.72 - 6.85	.48	8.72 - 8.85	.62	10.72 - 10.85	.76
.86 - 1.09	.07	2.86 - 3.09	.21	4.86 - 5.09	.35	6.86 - 7.09	.49	8.86 - 9.09	.63	10.86 - 11.09	.77
1.10 - 1.14	.08	3.10 - 3.14	.22	5.10 - 5.14	.36	7.10 - 7.14	.50	9.10 - 9.14	.64	11.10 - 11.14	.78
1.15 - 1.28	.09	3.15 - 3.28	.23	5.15 - 5.28	.37	7.15 - 7.28	.51	9.15 - 9.28	.65	11.15 - 11.28	.79
1.29 - 1.42	.10	3.29 - 3.42	.24	5.29 - 5.42	.38	7.29 - 7.42	.52	9.29 - 9.42	.66	11.29 - 11.42	.80
1.43 - 1.57	.11	3.43 - 3.57	.25	5.43 - 5.57	.39	7.43 - 7.57	.53	9.43 - 9.57	.67	11.43 - 11.57	.81
1.58 - 1.71	.12	3.58 - 3.71	.26	5.58 - 5.71	.40	7.58 - 7.71	.54	9.58 - 9.71	.68	11.58 - 11.71	.82
1.72 - 1.85	.13	3.72 - 3.85	.27	5.72 - 5.85	.41	7.72 - 7.85	.55	9.72 - 9.85	.69	11.72 - 11.85	.83
1.86 - 2.09	.14	3.86 - 4.09	.28	5.86 - 6.09	.42	7.86 - 8.09	.56	9.86 - 10.09	.70	11.86 - 12.09	.84

Analysis of Program graph & DD-Path Graph

The algorithm for the Sales Tax Round Bracket for integer% (6%, 7%, 8%) is very simple. If the decimal value of the taxable amount (Taxable Amount – Taxable Amount Rounded down to whole integer, for example, $5.25 has integer amount of 5 and decimal amount of 0.25.) is lower than .10, then the sales tax amount is rounded down to nearest hundredth of a dollar.

However, if the decimal value of the taxable amount is .10 or greater, then, the sales tax amount is rounded up to nearest hundredth of a dollar.

Thus, the DD-Path Graph has one if statement which has two options for decimal value lower than .10 and .10 or greater.

The DD-paths are as follows;

1. A->B->C->E->F
2. A->B->D->E->F

2. Test Case ID	PTFL0011
Program	Bracket Tax Calculator
Purpose of Test Case	To see if the Ebay Sales Tax Calculator properly rounds up its sales tax amount per DR-2X, the rounding bracket system set by the state of Florida.
Structural Test Type	Decision-to-Decision Path Testing
Path Being Tested	1. A->B->C->E->F
Pre-Conditions	The program prompts the tester to put products in a shopping cart where it computes the sales tax.
Inputs	(Subtotal, Zip Code, Item, Seller) (4649.07, 32611, shoes, Adidas)
Expected Outputs	325.43
All statements in path covered as expected?	Yes

Post-Conditions	The Ebay computes and display the sales tax amount.		
Execution History	**Date**	**Result**	**Tester**
	4/24/2019	325.43/Pass	Han Lee

3. Test Case ID	PTFL0012
Program	Bracket Tax Calculator
Purpose of Test Case	To see if the Ebay Sales Tax Calculator properly rounds up its sales tax amount per DR-2X, the rounding bracket system set by the state of Florida.
Structural Test Type	Decision-to-Decision Path Testing
Path Being Tested	2. A->B->D->E->F
Pre-Conditions	The program prompts the tester to put products in a shopping cart where it computes the sales tax.
Inputs	(Subtotal, Zip Code, Item, Seller) (4399.12, 32611, shoes, Adidas) (3999.2, 32611, shoes, Adidas) (3499.3, 32611, shoes, Adidas) (2749.45, 32611, shoes, Adidas) (1499.7, 32611, shoes, Adidas) (999.8, 32611, shoes, Adidas) (499.9, 32611, shoes, Adidas)
Expected Outputs	307.94

	279.95 244.96 192.47 104.98 69.99 35.00
All statements in path covered as expected?	Yes
Post-Conditions	The Ebay computes and display the sales tax amount.
Execution History	

Date	Result	Tester
4/24/2019	307.94 Pass	Han Lee
4/24/2019	279.95/Pass	Han Lee
4/24/2019	244.96/Pass	Han Lee
4/24/2019	192.47/Pass	Han Lee
4/24/2019	104.98/Pass	Han Lee
4/24/2019	69.99/Pass	Han Lee
4/24/2019	35.00/Pass	Han Lee

DEFECT REPORTING FORM

DEFECT ID: PLDF0001

TITLE: **The incorrectly not charged sales tax on Ebay sale from individual seller.**
COMPONENT: **Ebay's shopping cart software**
REPORTED BY: **Han Lee** **SUBCOMPONENT: The Sales Tax Calculator.**
REPORTED ON: **4/24/2019** **VERSION: Ebay**

PLATFORM: **PC** **RESOLUTION PRIORITY: P1 – Crash, no work around**
OPERATING SYSTEM: **Windows 10 Enterprise** **RESOLUTION SEVERITY: S1 – Highly visible defect.**
RELATED TEST CASE IDS: **PTFL0003**
CONSISTENCY: **Consistent**

DEFECT SUMMARY:

The Ebay Sales Tax Calculator does not charge sales tax on an item sold from a Florida individual seller.

STEPS TO REPRODUCE:

Go to Ebay.com and check out an item sold by an individual account and set the shipping address of any of the Florida addresses.

COMMENTS:

The sales tax should be charged regardless of whether the seller is a business dealer or an individual seller.

ATTACHMENTS:

1. Screenshot of the taxable item with seller address Brooksville, Florida
2. Screenshot of the checkout of the item with no tax shown.

For evaluators use only
DEFECT STATUS: _____APPROVED _____ REJECTED
REASON: _____

baby girl clothes 3-6 months

https://www.ebay.com/itm/baby-girl-clothes-3-6-months/173874870936?hash=item287bb

baby girl clothes 3-6 months

Condition: **Pre-owned**

Price: **US $5.00**

Buy It Now

Add to cart

Best Offer: Make Offer

Add to watch list

Free delivery in 3 days | Ships from United States

Bucks You'll earn **$0.05** in eBay Bucks. See conditions

Shipping: FAST 'N FREE
Guaranteed by **Mon. Apr. 29** | See details
Item location: Brooksville, Florida, United States
Ships to: United States

Payments: PayPal VISA MasterCard AMERICAN EXPRESS DISCOVER

PayPal CREDIT

Shop with confidence

eBay Money Back Guarantee
Get the item you ordered or get your money back. Learn more

Seller information
swallowtailkite (302 ★)
100% Positive feedback

Save this Seller
Contact seller
See other items

Pay Over Time With PayPal Credit

Subject to credit approval.

See Terms → PayPal CREDIT

a | Highlight All | Match Case | Whole Words | 350 of 779 matches

Type here to search | 85% | ENG | 11:16 PM 4/24/2019

Shopping cart

https://cart.ebay.com

Hi **handong**! | Daily Deals | Gift Cards | Help & Contact | Sell More. Earn More. Shop More. | Sell | My eBay

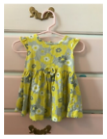
ebay | Shop by category | Search for anything | All Categories | Search | Advanced

Shopping cart (1 item)

Send Us Your Comments

Seller swallowtailkite

Request total



baby girl clothes 3-6 months
Pre-owned
LAST ONE

Qty 1
USPS First Class Package
3 days

$5.00
Free shipping
FAST 'N FREE
Guaranteed Delivery

Save for later | Remove

Go to checkout

Item (1)	$5.00
Shipping to 33569-2034	Free
Total	$5.00

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Norton SECURED

a | Highlight All | Match Case | Whole Words | 350 of 779 matches

Type here to search | 85% | ENG | 11:17 PM 4/24/2019

DEFECT REPORTING FORM

DEFECT ID: PLDF0002

TITLE: **The incorrect amount of sales tax on Ebay sale from a merchant seller**
COMPONENT: **Ebay's shopping cart software**
REPORTED BY: **Han Lee** **SUBCOMPONENT: The Sales Tax Calculator.**
REPORTED ON: **4/24/2019** **VERSION: Ebay**

PLATFORM: **PC** **RESOLUTION PRIORITY: P1 – Crash, no work around**
OPERATING SYSTEM: **Windows 10 Enterprise** **RESOLUTION SEVERITY: S1 – Highly visible defect.**
RELATED TEST CASE IDS: **PTFL0001**
CONSISTENCY: **Consistent**

DEFECT SUMMARY:

With the shipping address of hosford, Liberty County, the sales tax rate is 8%. However, $1.81 was charged on the taxable sales amount of 21.29 where the 1.81/21.29 is 8.5%. Thus, the Ebay Sales Tax Calculator is overcharging 0.5% on the item.

STEPS TO REPRODUCE:

Go to Ebay.com and make an account with any Florida address except for Hillsborough county (Hillsborough County is the only county with 8.5% rate) and search costume sold by the vendor 7thavenuestore and check the sales tax amount. Regardless of the county of shipping address in Florida, it will always calculate 8.5% sales tax regardless of which Florida county.

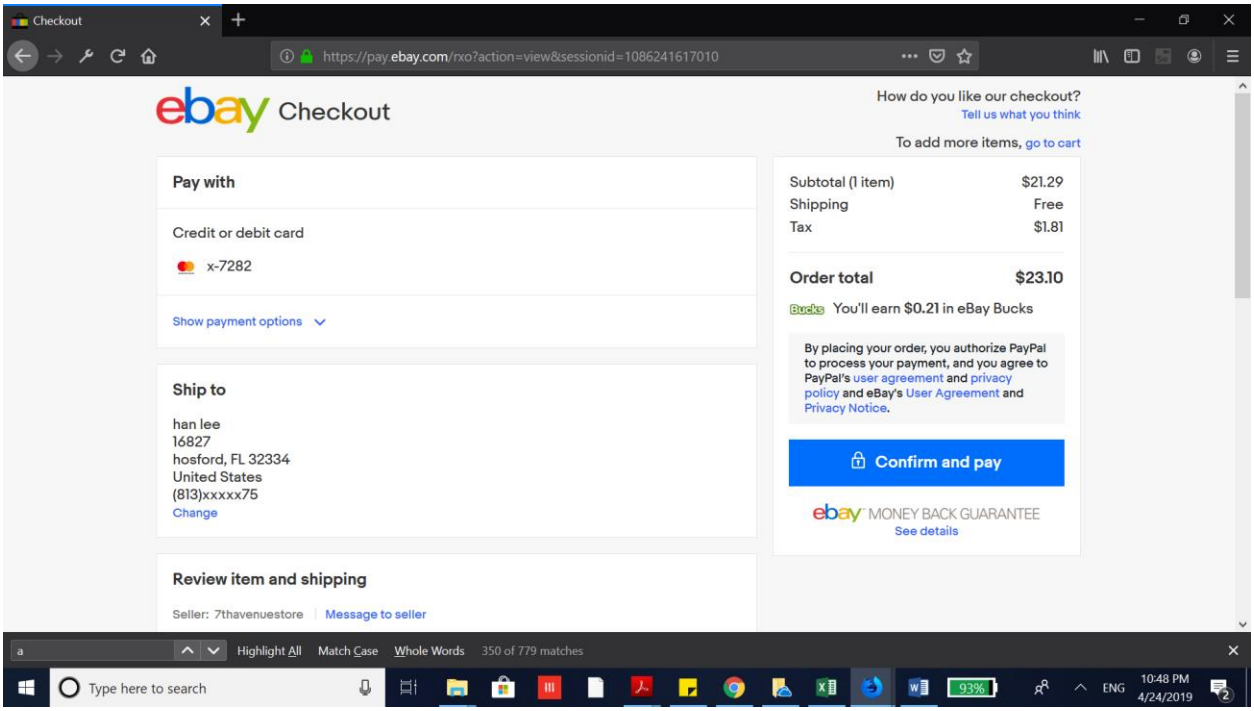
COMMENTS:

The peculiar thing is that Ebay correctly charges the Florida sales tax with the correct sales tax rate with respect to county when the seller was "Adidas". On the other hand, when the seller was 7thavenuestore, this defect happened.

ATTACHMENTS:

1. Screenshot of the checkout of costume with the shipping address with Liberty County.

For evaluators use only
DEFECT STATUS: _____APPROVED _____ REJECTED
REASON: _____



DEFECT ID: PLDF0003

TITLE: **The incorrect rounding of sales tax on Ebay sale from a merchant seller**
COMPONENT: **Ebay's shopping cart software**
REPORTED BY: **Han Lee** **SUBCOMPONENT: The Sales Tax Calculator.**
REPORTED ON: **4/24/2019** **VERSION: Ebay**

PLATFORM: **PC** **RESOLUTION PRIORITY: P1 – Crash, no work around**
OPERATING SYSTEM: **Windows 10 Enterprise** **RESOLUTION SEVERITY: S3 – Livable defect.**
RELATED TEST CASE IDS: **PTFL0009**
CONSISTENCY: **Consistent**

DEFECT SUMMARY:

The sales tax of $1.84 was calculated on the taxable subtotal amount of $21.69. However, the correct amount of sales tax is $1.85, as set by the state of Florida in DR-2X Form. The amount can be calculated on $20 ($20*8.5% = $1.70) and the $1.69 of sales fall in the interval of $1.65~$1.76 in DR-2X, where the sales tax amount is $.15. Thus, the total sales tax amount is $1.85 ($1.75 +$0.15).

STEPS TO REPRODUCE:

Go to Ebay.com and make an account with any Hillsborough county address and search costume sold by the vendor 7thavenuestore and check the sales tax amount. Put one costume in the shopping cart and check the sales tax amount if it was rounded correctly.

COMMENTS:

This defect is a livable defect as it is the least material.

ATTACHMENTS:

1. Screenshot of the sales tax of $1.84 when the taxable subtotal amount is 21.69.

For evaluators use only
DEFECT STATUS: _____APPROVED _____ REJECTED
REASON: _____

Checkout

https://pay.ebay.com/rxo?action=view&sessionid=1086340343010

ebay Checkout

How do you like our checkout?
Tell us what you think

To add more items, go to cart

Pay with

Credit or debit card

x-7282

Show payment options

Ship to

Handong Lee
11806 Whisper Creek Dr
Riverview, FL 33569-2034
United States
(813)xxxxx75
Change

Review item and shipping

Seller: 7thavenuestore | Message to seller

Black Panther Costume Kids Halloween Fancy Dress

Subtotal (1 item)	$21.69
Shipping	Free
Tax	$1.84
Order total	**$23.53**

Bucks You'll earn $0.22 in eBay Bucks

By placing your order, you authorize PayPal to process your payment, and you agree to PayPal's user agreement and privacy policy and eBay's User Agreement and Privacy Notice.

Confirm and pay

ebay MONEY BACK GUARANTEE
See details

Type here to search

15%

ENG 4:17 AM 4/25/2019