**Unit 1 Chapter 1 Worksheet: Debugging a Java Program**

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CSCI 421: Java Programming Principles I

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***Errors in SalesTax.java***

***Question #2***

* Received 3 errors and 1 warning when compiled in IntelliJ
  + ‘;’ expected (line 15)
    - **Missing a semi-colon (;) on line 15 after double tax. Should display as double tax;**
  + Cannot resolve symbol ‘totl’ (line 30)
  + Variable ‘total’ might not have been initialized (line 38)
  + Variable ‘total’ is never assigned (line 16)
    - **Missing the letter “a” in the word total on line 30, which, once corrected, causes the remaining error on line 38 and warning on line 16 to be fixed by initializing the variable total and also assigning the variable total.**
* Other errors that I noticed when running the program
  + Line 29 states ‘tax = price + TAX\_RATE;’
    - **Tax should be calculated as ‘tax = price \* TAX\_RATE;’**
  + Line 30 states ‘total = price \* tax;”
    - **Total should be calculated as ‘total = price + tax;’**

***Question #4***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Price | Tax | Total(Calculated) | Total(Output) |
| Shirt (with math errors) | $5 | $5.055 | $5.275 | $25.275 |
| Shirt (after changing math errors described above) | $5 | $0.275 | $5.275 | $5.275 |
| pants | $30 | 1.65 | $31.65 | $31.65 |