Lab 8 b

During the tax season, every Friday, J&J accounting firm provides assistance to people who prepare their own tax returns. Their charges are as follows:

a. If a person has low income (<= 25,000) and the consulting time is less than or equal to 30 minutes, there are no charges; otherwise the service charges are 40% of the regular hourly rate for the time over 30 minutes.

b. For others, if the consulting time is less than or equal to 20 minutes, there are no service charges; otherwise, service charges are 70% of the regular hourly rate for the time over 20 minutes. (For example, suppose that a person has low income, spent 1 hour and 15 minutes, and the hourly rate is $70.00. Then the billing amount is 70.00 \* 0.40 \* (45 / 60) = $21.00) Write a program that prompt the user to enter the hourly rate, the total consulting time, and if the person has low income. The program should output the billing amount. Your program must contain a method that takes as input the hourly rate, the total consulting time, and a value indicating if the person has low income. The method should return the billing amount. Your program may prompt the user to enter the consulting time in minutes.

Make sure and validate all user inputs as well as providing a testing grid validating program output.

Evaluation:

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| Aspect | Objectives substantially met  90 – 100% | Meets Minimal Requirements  80-89% | Needs Improvement  79 – 79% | Failure to Meet Requirements  0 - 69% |
| Good Programming Practices  10% | Effective use of white space.  Clear and appropriate documentation.  Implements all needed error handling.  Data types and identifiers meet all expectations. | Use of white space and documentation with minor defect. Implementation of error handling general but lacking in minor aspects.  Selection of data types and / or creation of identifiers not consistent. | Generally meets expectations for good programming practices. | In the main does not meet expectations for good programming practices. |
| Iterative structures  10% | Iterative structure appropriate to the processing needed including validation of all inputs | Iterative structure appropriate to the processing needed but validates only some inputs | Iteration for processing appropriate but input validation not performed | Iteration not used |
| Modularization  40% | Methods properly declared with an appropriate parameter list and provide appropriate return.  Method calls pass parameters correctly | Minor defects in definition of methods or the passing of parameters or return invalid, | Needs improvement in method declaration, method calls, return statements or parameter passing | Fails to properly modularize the algorithm or parameter lists not according to specs or specified return not made |
| Accuracy of Output  40% | All output correct and supported with appropriate testing. | With minor exceptions the output is correct and testing may be missing some needed test cases. | Only part of the output is correct as a result of inadequate test cases. | Only some of the output is correct as a result of missing or misused test cases. |