#### **Instructions**

Consider the following program description:

"Write a program that determines yearly income tax amount. When the user enters yearly total earnings, the application should calculate and print the tax amount to be paid. Use the following rules table for tax calculations (actual values for 2020 - taken from https://www.gib.gov.tr/gelir-vergisi-tarifesi-2020). The application should display an error message if the input value is less than zero.

| Tax rates | |
| --- | --- |
| **Income** | **Rate** |
| Up to 22.000 TL: | 15% |
| Up to 49.000 TL: 3.300 TL for 22.000 TL plus for the remaining amount | 20% |
| Up to 120.000 TL: 8.700 TL for 49.000 TL plus for the remaining amount | 27% |
| Up to 600.000 TL: 27.870 TL for 120.000 TL plus for the remaining amount | 35% |
| More than 600.000 TL: 195.870 TL for 600.000 TL plus for the remaining amount | 40% |

****For the above description:****

1. Develop a program using a language of your choice.
2. Derive equivalence classes.
3. Apply boundary values analysis.
4. Generate test cases.
5. Implement unit tests for the test cases you have generated in 4.

****Submit:****

1. A report of the equivalence classes you have derived, boundary value analysis and test cases (input and the expected output) with an explanation of how you have derived them,
2. Source code (both the program and the unit tests),
3. A screenshot showing that all of your tests are successful.