



Practice Assignments -3– Object Oriented Programming 1

(If,If....else, If...else if ,)

Note: 1. Submission only via E-CLASS is acceptable (If you have any issue with E-CLASS, Please consult IT Dept.)

2. Comments should be included in your source code; otherwise.

3. Do not plagiarize on doing your work, if we catch student doing so, he/she will get ZERO for the Assignment.

1. Write a program to calculate tax, given the following conditions:

- If salary is less than or equal to 1500 USD then tax will be zero.
- If salary is in the range of 1501 to 3000 USD ($1501 \leq \text{salary} \leq 3000$) then tax will be charged with rate of 10%.
- If salary is in the range of 3001 to 5000 USD ($3001 \leq \text{salary} \leq 5000$) then tax will be charged with rate of 20%.
- If taxable income is above 5000 then tax will be charged with rate of 30%.

(Hint: formula for tax is : $(\text{salary} * \text{rate}) / 100$

You need to display two things:

Tax payable

Income after tax deduction

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2. Write a program to test whether a number entered is positive, negative or zero.

3. A certain grade of steel is graded according to the following conditions:

- a. Hardness must be greater than 50.
- b. Carbon content must be less than 0.7.
- c. Tensile strength must be greater than 5600.

The grades are as follows:

If all three conditions are satisfied then Grade will be 10.

If condition (a) and (b) are satisfied then Grade will be 9.

If conditions (b) and (c) are satisfied then Grade will be 8.

If conditions (a) and (c) are satisfied then Grade will be 7.

If any one condition is satisfied then Grade will be 6.

If none of the conditions are satisfied then Grade will be 5.

Write a program which will require the user to **input** values of hardness, carbon content and tensile strength of the steel and print the grade of steel according to the given conditions.

4. Write a program to check that the entered character from a keyboard is upper case alphabet or not.

(Hint: input a character using cin.

Check if it is an upper case alphabet or not.

You can use ASCII code for uppercase alphabets (For A =65, for Z=90)

5. Write a program to display a calculator with arithmetic operator using switch case.

6. Write a program to find that entered year is leap year or not.

(Hint: three criteria must be taken into account to identify leap years:

a)The year must be evenly divisible by 4;

b) If the year can also be evenly divided by 100, it is not a leap year; unless... The year is also evenly divisible by 400. Then it is a leap year.

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