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**BSIT-S-T-1A-T**
**UNIT TEST**

Unit Exam 1

1. Write a program that allows the user to compute for the salary of an employee for a month given the following conditions:

| Position | Paygrade A | PayGrade B | TaxRate |
|---|---|---|---|
| M-Messenger | 5,500 | 6500 | 5% |
| E-Encoder | 6,500 | 7500 | 6% |
| T-Technician | 7,500 | 8500 | 7% |
| P-programmer | 10,000 | 10500 | 8% |
| S-System Analyst | 12,500 | 12,500 | 9% |

Regular working hours for one month is 160 hrs. Beyond 160 is paid 1.5 times of the regular wage rate.
Deductions are sss = 200, pag-ibig = 100. Withholding tax = gross * taxRate
Net = PaySalary – (sss+pagibig +withholdingTax).

Display also the actual employee's name, company, department, actual description of the position, hours worked, overtime pay, pay grade, deductions, and net salary. The user can input and process data as he wants.

## Code:

```c
#include <stdio.h>
#include <windows.h>
#include <conio.h>
int main(){
    int pos_code;
//  char pos;
    char *name="name", *company="comp", *department="dep", *actual_pos="";
    int hours = 0;
    int paygradeA = 0;
    int paygradeB = 0;
    int dSSS = 200;
    int dPAG_IBIG = 100;
    int grossA = 0, grossB = 0;
    int w_taxA = 0, w_taxB = 0;
    int netSalaryA, netSalaryB = 0;
    int overtimePayA = 0, overtimePayB = 0;
    float taxRate = 0;

    printf("Enter your name: ");
    scanf("%s", &name);
    printf("Enter your company: ");
    scanf("%s", &company);
    printf("Enter your department: ");
    scanf("%s", &department);
    printf("Enter hours worked: ");
    scanf("%d", &hours);
    printf("Enter your position letter (M: 1 - E: 2 - T: 3 - P: 4 - S: 5): ");
    scanf("%d", &pos_code);
```

```c
    switch(pos_code){
        case 1:
            actual_pos = "Messenger";
            paygradeA = 5500;
            paygradeB = 6500;
            taxRate = 0.05;
            break;
        case 2:
            actual_pos = "Encoder";
            paygradeA = 6500;
            paygradeB = 7500;
            taxRate = 0.06;
            break;
        case 3:
            actual_pos = "T-Technician";
            paygradeA = 7500;
            paygradeB = 8500;
            taxRate = 0.07;
            break;
        case 4:
            actual_pos = "Programmer";
            paygradeA = 10000;
            paygradeB = 10500;
            taxRate = 0.08;
            break;
        case 5:
            actual_pos = "System Analyst";
            paygradeA = 12500;
            paygradeB = 12500;
            taxRate = 0.09;
            break;
```

```c
    if(hours>160){
        overtimePayA = paygradeA*0.5;
        paygradeA = paygradeA + overtimePayA;
        overtimePayB = paygradeB*0.5;
        paygradeB = paygradeB + overtimePayB;
    }
    grossA = paygradeA * hours;
    grossB = paygradeB * hours;
    w_taxA = grossA * taxRate;
    w_taxB = paygradeB * taxRate;
    netSalaryA = grossA - (dSSS+dPAG_IBIG+w_taxA);
    netSalaryB = grossB - (dSSS+dPAG_IBIG+w_taxB);



    printf("Name:\t %s\n", name);
    printf("Company:\t %s\n", company);
    printf("Department:\t %s\n", department);
    printf("Actual Position:\t %s\n", actual_pos);
    printf("Hours worked: %d\n\n", hours);

    printf("[Values for Paygrade A]\n");
    printf("Paygrade A: %d\n", paygradeA);
    printf("Withholding Tax: %d\n", w_taxA);
    printf("Net Salary: %d\n", netSalaryA);
    printf("Overtime Pay: %d\n", overtimePayA);

    printf("\n[Values for Paygrade B]\n");
    printf("Paygrade B: %d\n", paygradeA);
    printf("Withholding Tax: %d\n", w_taxB);
    printf("Net Salary: %d\n", netSalaryB);
    printf("Overtime Pay: %d\n", overtimePayB);

    return 0;
```

**OUTPUT**

```
D:\i\d\Coding\C Language\C
Enter hours worked: 123
Enter your position letter (M: 1 - E: 2 - T: 3 - P: 4 - S: 5): 3
Name:    name
Company:         comp
Department:      dep
Actual Position:         T-Technician
Hours worked: 123

[Values for Paygrade A]
Paygrade A: 7500
Withholding Tax: 64575
Net Salary: 857625
Overtime Pay: 0

[Values for Paygrade B]
Paygrade B: 7500
Withholding Tax: 595
Net Salary: 1044605
Overtime Pay: 0

--------------------------------
Process exited after 8.402 seconds with return value 0
Press any key to continue . . .
```

2. Schedule X – Single Taxpayers

| Over | But not over | Of the amt. over |
|---|---|---|
| P20,000 | P22,000 | P5,230 + 38% | P20,000 |
| P22,000 | P26,000 | P5,990 + 40% | P22,000 |
| P26,000 | P32,000 | P7,590 + 45% | P26,000 |
| P32,000 | P38,000 | P10,290 + 50% | P32,000 |
| P38,000 | P44,000 | P13,290 + 55% | P38,000 |

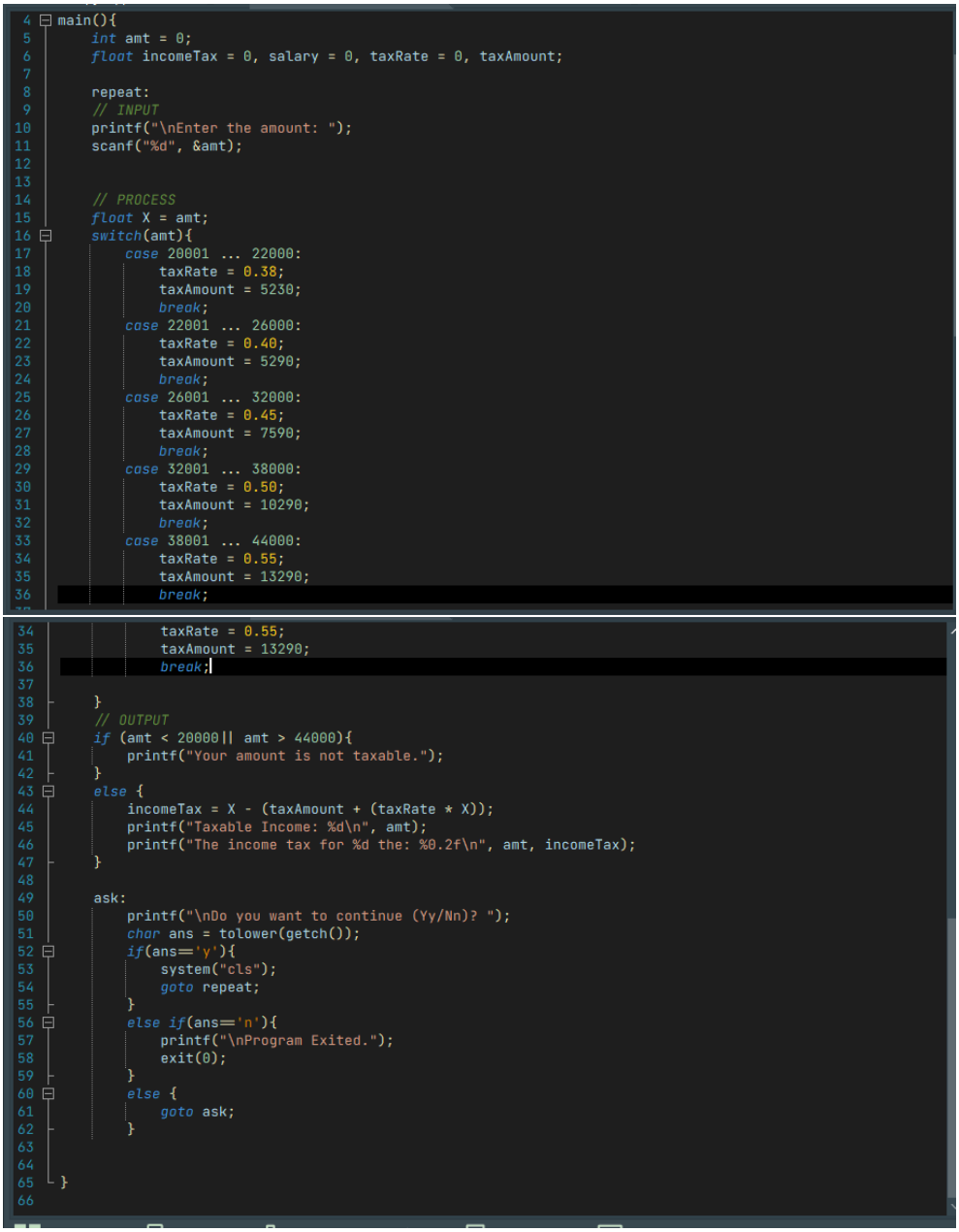
A program may be written to compute the income tax for a single taxpayer if her or taxable (X) is given. A number of decision-branching blocks may be used in the program to determine the appropriate tax formula used in the computations of the income tax.

Example: Assume X = 21500

Incometax = X – (5230 +(38% of the amount over 20000))

Display on the screen the taxable income (salary) and income tax. The user can input data as long as he wants.

**CODE:**



```c
main(){
    int amt = 0;
    float incomeTax = 0, salary = 0, taxRate = 0, taxAmount;

    repeat:
    // INPUT
    printf("\nEnter the amount: ");
    scanf("%d", &amt);


    // PROCESS
    float X = amt;
    switch(amt){
        case 20001 ... 22000:
            taxRate = 0.38;
            taxAmount = 5230;
            break;
        case 22001 ... 26000:
            taxRate = 0.40;
            taxAmount = 5290;
            break;
        case 26001 ... 32000:
            taxRate = 0.45;
            taxAmount = 7590;
            break;
        case 32001 ... 38000:
            taxRate = 0.50;
            taxAmount = 10290;
            break;
        case 38001 ... 44000:
            taxRate = 0.55;
            taxAmount = 13290;
            break;
```



```c
            taxRate = 0.55;
            taxAmount = 13290;
            break;

    }
    // OUTPUT
    if (amt < 20000|| amt > 44000){
        printf("Your amount is not taxable.");
    }
    else {
        incomeTax = X - (taxAmount + (taxRate * X));
        printf("Taxable Income: %d\n", amt);
        printf("The income tax for %d the: %0.2f\n", amt, incomeTax);
    }

    ask:
        printf("\nDo you want to continue (Yy/Nn)? ");
        char ans = tolower(getch());
        if(ans=='y'){
            system("cls");
            goto repeat;
        }
        else if(ans=='n'){
            printf("\nProgram Exited.");
            exit(0);
        }
        else {
            goto ask;
        }


}
```

```
Enter the amount: 21500
Taxable Income: 21500
The income tax for 21500 the: 8100.00

Do you want to continue (Yy/Nn)?
Enter the amount: 31300
Taxable Income: 31300
The income tax for 31300 the: 9625.00

Do you want to continue (Yy/Nn)?
Program Exited.
--------------------------------
Process exited after 13.94 seconds with return value 0
Press any key to continue . . .
```