



COLLEGE OF ENGINEERING AND COMPUTER STUDIES

OUTCOMES EVALUATION 3

Application of Branching

Submitted By
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Course & Section
BSCS 1-1

Date
9/23/21



OUTCOMES OUTLINE

I. DESCRIPTION

Application of branching with conditional statement

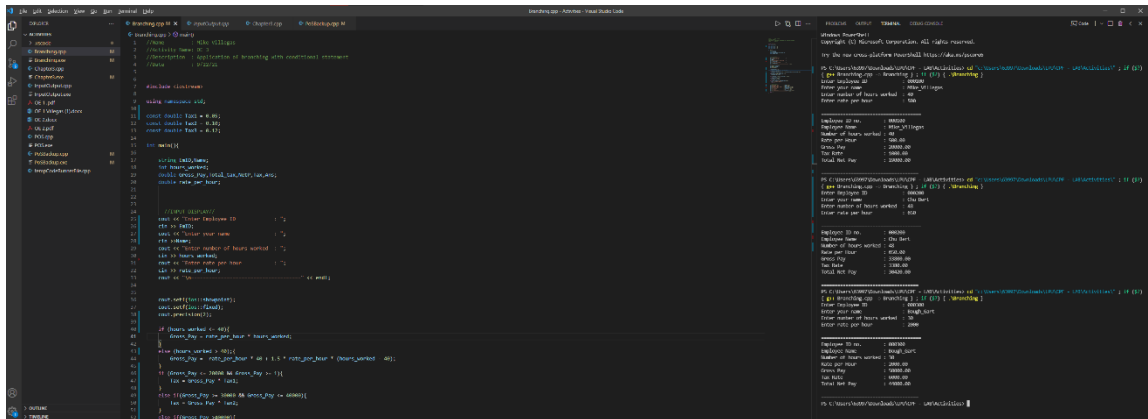
II. THEORETICAL FRAMEWORK

INPUT	PROCESS	OUTPUT
Employee ID	<pre>cout << "Enter Employee ID : "; cin >> EmID;</pre>	Employee ID
Name	<pre>cout << "Enter your name : "; cin >>Name;</pre>	Name
hours_worked	<pre>cout << "Enter number of hours worked : "; cin >> hours_worked;</pre>	hours_worked
rate_per_hour	<pre>cout << "Enter rate per hour : "; cin >> rate_per_hour;</pre>	rate_per_hour
Gross_Pay	<pre>if (hours_worked <= 40){ Gross_Pay = rate_per_hour * hours _worked; } else (hours_worked > 40);{ Gross_Pay = rate_per_hour * 40 + 1.5 * rate_per_hour * (hours_worked - 40); }</pre>	Gross_Pay
Tax Rate	<pre>if (Gross_Pay <= 20000 && Gross_Pay >= 1) { Tax = Gross_Pay * Tax1; } else if(Gross_Pay >= 30000 && Gross_Pay < = 40000){ Tax = Gross_Pay * Tax2; } else if(Gross_Pay >40000){</pre>	Tax Rate

	$\text{Tax} = \text{Gross_Pay} * \text{Tax3};$	
Total Net Pay	<code>cout << "Total Net Pay : " << Gross_Pay - Tax << endl;</code>	Total Net Pay

III. SCREEN SHOTS

A. Visual Studio Code



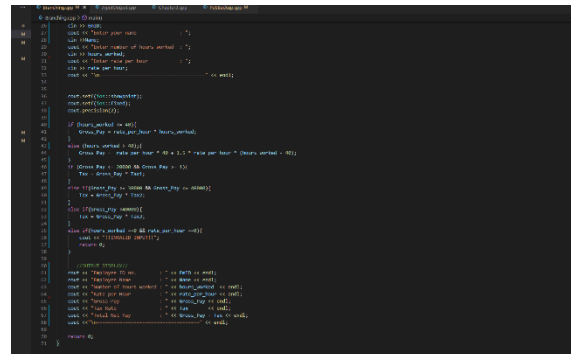
B. Sample Input/Output

Input:

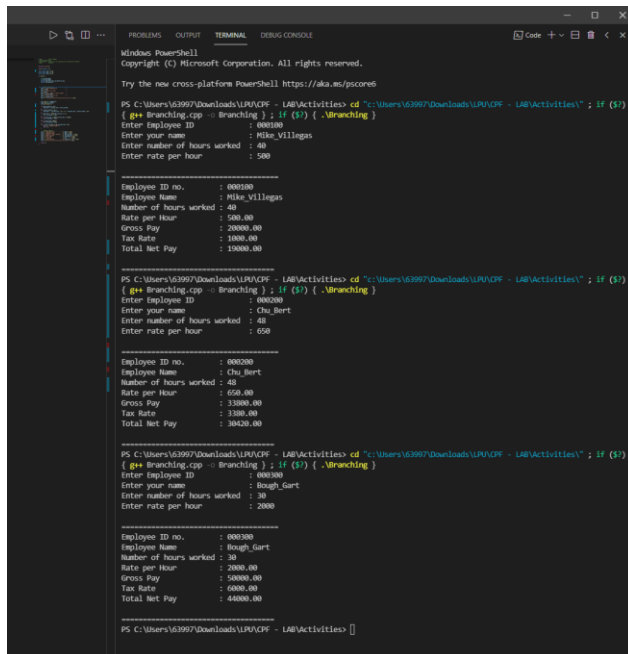
```

1 //Name : Mike Villegas
2 //Activity Name: OE 3
3 //Description : Application of branching with conditional statement
4 //Date : 9/22/21
5
6 #include <iostream>
7 using namespace std;
8
9 const double Tax1 = 0.05;
10 const double Tax2 = 0.10;
11 const double Tax3 = 0.12;
12
13 int main()
14 {
15     string EmID, Name;
16     int hours_worked;
17     double Gross_Pay, Total_tax, NetP, Tax, Ans;
18     double rate_per_hour;
19
20     //INPUT DISPLAY//
21     cout << "Enter Employee ID : ";
22     cin >> EmID;
23     cout << "Enter your name : ";
24     cin >> Name;
25     cout << "Enter number of hours worked : ";
26     cin >> hours_worked;
27     cout << "Enter rate per hour : ";
28     cin >> rate_per_hour;
29     cout << "\n===== " << endl;
30
31     cout.setf(ios::showpoint);
32     cout.setf(ios::fixed);
33     cout.precision(2);
34
35     if (hours_worked <= 40)
36     {
37         Gross_Pay = rate_per_hour * hours_worked;
38     }
39     else if (hours_worked > 40)
40     {
41         Gross_Pay = rate_per_hour * 40 + 1.5 * rate_per_hour * (hours_worked - 40);
42     }
43     if (Gross_Pay <= 20000 && Gross_Pay >= 1)
44     {
45         Tax = Gross_Pay * Tax1;
46     }
47     else if (Gross_Pay >= 30000 && Gross_Pay <= 40000)
48     {
49         Tax = Gross_Pay * Tax2;
50     }
51     else if (Gross_Pay > 40000)
52     {
53         Tax = Gross_Pay * Tax3;
54     }
55 }

```



Output: Result of 3 Different Tax Schemes (5%, 10%, 12%);



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\63997\Downloads\LPU\CP - LAB\Activities> cd "C:\Users\63997\Downloads\LPU\CP - LAB\Activities"; if ($?) { g++ branching.cpp -o branching }; if ($?) { .\branching }
Enter employee ID : 000100
Enter your name : Mike Villegas
Enter number of hours worked : 40
Enter rate per hour : 500

Employee ID no. : 000100
Employee Name : Mike Villegas
Number of hours worked : 40
Rate per Hour : 500.00
Gross Pay : 20000.00
Tax Rate : 1000.00
Total Net Pay : 19000.00

PS C:\Users\63997\Downloads\LPU\CP - LAB\Activities> cd "C:\Users\63997\Downloads\LPU\CP - LAB\Activities"; if ($?) { g++ branching.cpp -o branching }; if ($?) { .\branching }
Enter employee ID : 000200
Enter your name : Chu Bert
Enter number of hours worked : 40
Enter rate per hour : 650

Employee ID no. : 000200
Employee Name : Chu Bert
Number of hours worked : 40
Rate per Hour : 650.00
Gross Pay : 26000.00
Tax Rate : 3100.00
Total Net Pay : 22900.00

PS C:\Users\63997\Downloads\LPU\CP - LAB\Activities> cd "C:\Users\63997\Downloads\LPU\CP - LAB\Activities"; if ($?) { g++ branching.cpp -o branching }; if ($?) { .\branching }
Enter employee ID : 000300
Enter your name : Bough Gert
Enter number of hours worked : 20
Enter rate per hour : 2000

Employee ID no. : 000300
Employee Name : Bough Gert
Number of hours worked : 20
Rate per Hour : 2000.00
Gross Pay : 40000.00
Tax Rate : 6000.00
Total Net Pay : 34000.00

PS C:\Users\63997\Downloads\LPU\CP - LAB\Activities>
```

IV. PROGRAM SOURCE CODE

```
//Name      : Mike Villegas
//Activity Name: OE 3
//Description : Application of branching with conditional statement
//Date       : 9/22/21

#include <iostream>

using namespace std;

const double Tax1 = 0.05;
const double Tax2 = 0.10;
const double Tax3 = 0.12;

int main(){

    string EmID,Name;
    int hours_worked;
```



```
double Gross_Pay, Total_tax, NetP, Tax, Ans;
double rate_per_hour;

//INPUT DISPLAY//
cout << "Enter Employee ID          : ";
cin >> EmID;
cout << "Enter your name            : ";
cin >> Name;
cout << "Enter number of hours worked : ";
cin >> hours_worked;
cout << "Enter rate per hour          : ";
cin >> rate_per_hour;
cout << "\n===== " << endl;

cout.setf(ios::showpoint);
cout.setf(ios::fixed);
cout.precision(2);

if (hours_worked <= 40){
    Gross_Pay = rate_per_hour * hours_worked;
}
else (hours_worked > 40){
    Gross_Pay = rate_per_hour * 40 + 1.5 * rate_per_hour * (hours_wor
ked - 40);
}
if (Gross_Pay <= 20000 && Gross_Pay >= 1){
    Tax = Gross_Pay * Tax1;
}
else if(Gross_Pay >= 30000 && Gross_Pay <= 40000){
    Tax = Gross_Pay * Tax2;
}
else if(Gross_Pay > 40000){
    Tax = Gross_Pay * Tax3;
}
else if(hours_worked == 0 && rate_per_hour == 0){
    cout << "!!INVALID INPUT!!";
    return 0;
}

//OUTPUT DISPLAY//
cout << "Employee ID no.          : " << EmID << endl;
```



```
cout << "Employee Name      : " << Name << endl;
cout << "Number of hours worked : " << hours_worked << endl;
cout << "Rate per Hour        : " << rate_per_hour << endl;
cout << "Gross Pay             : " << Gross_Pay << endl;
cout << "Tax Rate              : " << Tax << endl;
cout << "Total Net Pay          : " << Gross_Pay - Tax << endl;
cout << "\n===== " << endl;

return 0;
}
```

V. LEARNING OUTCOMES

At first, I got confused on what code will I type because this OE applies conditions on what will the program do to the statement plus the equations you have to implement. So far, I've learned to be more resilient and be patient after this OE.

VI. Github Link

<https://github.com/MikeVillegas00/Activities>

VII. REFERENCES (If any...)

Ref 1

<http://www.cplusplus.com/forum/beginner/205844/>

Ref 2

<https://beginnersbook.com/2017/08/cpp-if-else-statement/>

Ref 3

<https://www.programiz.com/cpp-programming/if-else>

Ref 4

<https://stackoverflow.com/questions/9214464/multiple-conditions-in-c-if-statement>