

1. Any student caught taking part in any form of dishonesty and misconduct will get a zero and reported to the Dean.
2. After the exam, if there is any suspicion about the integrity of the exam of any student, the student will be invited for an interview and possibly an oral exam.
3. Create a folder called xy where x is your first name and y is your last name. Save all your files in this folder.
4. Make sure you regularly save your work. (Pay attention to the point 8 below!). **You MUST submit your progressing work to Blackboard every 40 minutes.**
5. After you complete the program, close all the files, then compress the folder xy and upload xy.zip. You can compress the folder by right clicking the folder, and hit the Send To option, and select compressed (zipped) folder.
6. **MAKE SURE YOU SUBMIT on blackboard (and double check your submission by downloading and extracting the files to check if everything works).**
7. Now, let your instructor know when you are done with the submission, and he will check if the status says submitted.
8. **You are completely responsible for the submission on Blackboard. Any error in submission or compression will result in a ZERO. NO EXCEMPTION!**

You are supposed to write a program that calculates and displays the pay slip for the payment to an employee. An employee gets paid based on the number of hours and hourly rate fee. An employee can work overtime. Overtime payment is more, and the rate is higher. A fixed tax amount is deducted from an employee. Gross payment is before tax and Net payment is after tax.

Requirements:

1. Your program must have 2 methods in addition to the main method
 - a. A method that displays a message and asks the user to enter a value. This method converts the string input of the user and returns the value of input (of type float)
 - i. This method has 1 input parameter that is the text that is going to be shown to the user and asks for input
 - ii. This method has 1 return value that is the numeric value that the user has entered.
 - iii. You invoke (call) this method 2 times: first to get *number of work hours*, then to get *hourly rate amount*.
Note: you do not define 2 methods. As requested, you define 1 method, but you call (invoke) it 2 times with different input arguments.
 - iv. Use TryParse for converting user input string to float data type.
 - v. This method must check whether the User Input is a numeric value. If it is a numeric value, the value must be positive or zero. If the value is not numeric or the value is not zero or more, the method displays an error message on the console.
 - vi. If the user input is invalid, the method returns 0, otherwise it returns the converted value of the user input.
 - b. A method that calculates the gross payment based on *Work Hours, Hourly Pay Rate, Overtime Limit*.
 - i. This method has three input parameters: *Work Hours, Hourly Pay Rate, Overtime Limit*
 - ii. This method has 1 return value that is *calculated gross payment (of type double)*
 - iii. This method calculates the gross payment as:
 - iv. If the *work hours* is less than or equal to *overtime limit (limit is 40 hours)* then

$$\text{Gross Pay} = \text{Work Hours} \times \text{hourlyRate}$$
 - v. If the *work hours* is more than *overtime limit (40)* and *less than 50* then

$$\text{Gross Pay} = ((\text{Work Hours} - \text{Over Time Limit}) \times \text{hourlyRate} \times 1.5) + (\text{Over Time Limit} \times \text{hourlyRate})$$
 - vi. If the *work hours* is more than or equal to *50* and *less than 60* then

$$\text{Gross Pay} = ((\text{Work Hours} - \text{Over Time Limit}) \times \text{hourlyRate} \times 2) + (\text{Over Time Limit} \times \text{hourlyRate})$$
 - vii. We assume that the user does not enter a value greater than 60 for the work hours
2. Your program must validate the inputs:
 - a. *Work hours* must be greater than 0. *Hourly rate* must be greater than 0.
 - b. Over Time Limit is 40 hours. Store it in your program as a constant value.
 - c. Tax Rate is a fixed value 9% (or 0.09). Store as a constant value in your program.
 - d. Your program asks the hourly rate if the work hours is valid. If work hours is not valid, your program will not ask the hourly rate and will not do any calculation. Then if the hourly rate is valid, then your program calls the method for calculating the gross payment. And then display the table on the console. See the screenshots.
3. The formula for calculating the Tax and Net Pay is:
 - a. Tax Amount = Gross Pay × Tax Rate
 - b. Net Pay = Gross Pay × (1 – Tax Rate)
4. Your program must display the summary of purchase as it is shown on the screenshots.
 - a. Pay attention to the quotation marks and other characters
 - b. You must use only Write and not WriteLine at all
 - c. The first column width is 15, right aligned. The second column width is 9, right aligned
 - d. Currency symbols are displayed by using formatting specifiers and you must not type \$ in your program source code
 - e. Pay attention that the Net Pay value is ceiled.
5. Make sure that your program produces the same outputs as you can see in all screenshots. Use the values in the screenshots as test data.
6. Write your full name and student ID as a comment on top of your code.
7. Respect Naming Convention for variable names, constant names and method names
8. Choose meaningful and descriptive names for variables, constants, and methods
9. Respect coding style: indentation, spacing, new lines, ...

Screenshots

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: 45
Enter hourly rate: 20

Employee Pay Slip
.....
Total Hours    45.00 hours
Hourly Rate    $20.00
Overtime Hours    5 hours
Gross Pay      $950.00
Tax            $85.50

Net Pay        $865.00
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: 56.5
Enter hourly rate: 10.25

Employee Pay Slip
.....
Total Hours    56.50 hours
Hourly Rate    $10.25
Overtime Hours    16.5 hours
Gross Pay      $748.25
Tax            $67.34

Net Pay        $681.00
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: 35
Enter hourly rate: 15.75

Employee Pay Slip
.....
Total Hours    35.00 hours
Hourly Rate    $15.75
Overtime Hours    0 hours
Gross Pay      $551.25
Tax            $49.61

Net Pay        $502.00
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: -10
Enter a positive numeric value!
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: sxxd
Enter a numeric value!
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: 35
Enter hourly rate: -30
Enter a positive numeric value!
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: 35
Enter hourly rate: esdw
Enter a numeric value!
```

```
Salary Calculator - By Saeed Mirajili
Enter number of work hours in this week: 36.25
Enter hourly rate: 15.75

Employee Pay Slip
.....
Total Hours    36.25 hours
Hourly Rate    $15.75
Overtime Hours    0 hours
Gross Pay      $570.94
Tax            $51.38

Net Pay        $520.00
```