CECS 174 – Assignment 6

Part A - Grading Scale - Create and draw the flowchart for each of the following programs. Then write the code based on your flowchart.

Write three separate programs that take in an integer representing a student's exam score and then outputs the corresponding letter grade. Assign a letter grade on the standard grading scale of 90-100 = A, 80-89 = B, etc, use the following programming structures for your three programs:

> **Part 1**: If (no else) statements and logical operators.
> **Part 2**: Nested If Else statements.
> **Part 3**: Else If statements.

Example Outputs:
```
Please enter an Exam Score: 87
This student received a 'B'.

Please enter an Exam Score: 62
This student received a 'D'.
```

Part B - Nested If Statements –

Taxes – Create a flowchart and then write a program that uses **Nested If-Statements** to determine and calculate the user's California income tax bracket and tax amount. Each bracket is taxed separately at each different rate. For example, if you made $40,000, your first $8,700 is taxed at 10% (or $870.00), the amount earned between $8,700 and $35,350 is taxed at 15% (or $3,997.50), and then the amount between $35,350 and $40,000 is taxed at 25% (or $1,162.50). Which comes to a total of $6,030.00 in taxes, which is an effective tax rate of 15.08%.

Rates: $0   – $8,700   = 10%
      $8,700   – $35,350 = 15%
      $35,350 – $85,650 = 25%
      $85,650 – $178,650 = 28%
      $178,650 – $388,350 = 33%
      $388,350 +   = 35%

Example Output:
```
Please enter your income amount: 90000
Tax = $18,660.50
Effective Tax Rate = 20.07%
```