1. Using pseudocode, develop an algorithm to represent the following grading scale.

A+ = 97-100

A = 94-96

A- = 90-93

B+ = 87-89

B = 84-86

B- = 80-83

C+ = 77-79

C = 74-76

C- = 70-73

What outputs are requested? Convert numerical grade into grading scale.

What inputs are available? Student numerical grade.

What processing is required? Get numerical grade, search for correct letter grade, convert to grade.

Variables:

numGrade

letterGrade

// Program name: Grade Converter

// Purpose: Convert numerical grade into letter grade

// Author: Eric Phu

// Date last modified: 27-Dec-2019

Start

Display “Welcome to the Grade Converter.”

// Declare variables

Declare Numeric numGrade. // Number grade

Declare String letterGrade // Letter Grade

// Get input from user

Display “Enter number grade”  
 Input numGrade

// Fetch letter grade

If numGrade < 70:

letterGrade = “error not in grading scale“

Else if numGrade < =73:

letterGrade = “C-”

Else if numGrade < =76:

letterGrade = “C”

Else if numGrade <= 79

letterGrade = “C+”

Else if numGrade < =83

letterGrade = “B-”

Else if numGrade <= 86

letterGrade = “B”

Else if numGrade < =89

letterGrade = “B+”

Else if numGrade < =93

letterGrade = “A-”

Else if numGrade <= 96

letterGrade = “A”

Else:

letterGrade = “A+”

// Display letter grade

Display “The letter grade is ” + letterGrade

Stop

1. Using pseudocode, write an algorithm that uses income tax information for the tax year 2010 to calculate the deductions made on your salary. The algorithm should show your monthly take-home pay.

What outputs are requested ? Monthly take-home pay

What inputs are available? Monthly income and income tax rate

What processes are required? Get input. Multiply income by (1- income tax) to get monthly take home pay.

Variables:

Constant variable TAX\_2010

monthIncome

incomeAfterTax

// Program name: Monthly Income Calculator for 2010

// Purpose: Display monthly income after tax for 2010

// Author: Eric Phu

// Date last modified 27-Dec-2019

Start

// Declare Variables

Declare Constant TAX\_2010 = 0.25 // Income tax via Google

Declare Numeric monthIncome // Monthly income

Declare Numeric incomeAfterTax // Income After Tax

// Get input from user

Display “Enter your monthly income for 2010”

Input monthIncome

//Calculate

incomeAfterTax = monthIncome \* (1 – TAX\_2010)

//Displays income after tax

Display “Your monthly income for 2010 was: $” + incomeAfterTax

Stop