Nested If Assignment Problems. Do the IPO and code for each of the problems below.

1. The student will enter their last name and score. Determine their letter grade using the scale below. Display the student last name and letter grade.

Score Letter Grade

90 & up A

80 to 89 B

70 to 79 C

60 to 69 D

Below 60 F

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Lname (string)  Score (double) | Determine leter grade based off the score | Lname |
|  | If score >= 90  grade = A  Else if score >= 80  grade = B  Else if score >= 70  Grade = C  Else if score >= 60  Grade = D  Else  Grade = F | grade |
|  |  |  |
|  |  |  |
|  |  |  |

1. You are buying apples in bulk. Enter the quantity in pounds, determine the price per pound, then display the price per pound and total.

LBS Price Per Pound

>100 .10

50-100 .25

Under 50 .50

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Lbs (double) | Determine price per pound  If lbs > 100  Prcperlbs = .10  Else if lbs >= 50  Priceperlbs - .25  Else  Prcperpount = .50 | Prcperlbs |
|  | Calulate total price  Totprc = lbs \* prcperlbs | totprc |
|  |  |  |
|  |  |  |
|  |  |  |

1. Enter the employee last name, hours worked and job code. Compute the pay based on the hourly rate per the job code. Display employee last name, hours worked, pay rate and total.

Job Code Pay Rate

E 25.00

J 20.00

A 15.00

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Lname (string)  Hworked (int)  Jcode (char) | Compute pay based on hours worked per job code  If (jcode == ‘E’ || jcode == ‘e’)  Prate = 25.00  Else if(jcode == ‘J’ || jcode == ‘j’)  Prate = 20.00  Else if(jcode == ‘A’ || jcode == ‘a’)  Prate = 15.00 | Lname  Hworked  prate |
|  | Caluclate total pay  Totpay = hworked \* prate | totpay |
|  |  |  |
|  |  |  |
|  |  |  |

1. Allow the user to enter the annual salary. Determine the tax rate from the table below. Compute the tax amount owed. Display salary, tax rate and tax amount.

Salary Tax Rate

>100,000 40%

50,000 - 100,000 35%

Under 50,000 25%

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| slry (double) | Determine tax rate  If (slry > 100,000)  Taxrt = 40%  Else if (slry >= 50,000)  Taxrt = 35%  Else  Taxrt = 25% | Slry  Taxrt |
|  | Calculate tax amout  Taxamnt = Slry \* taxrt | taxamnt |
|  |  |  |
|  |  |  |
|  |  |  |

1. You are running a metal recycling center and must pay people for metals they bring in. You give them a rate based on the weight in the table below. Allow the user to enter the weight. Determine the rate and then display the weight, rate and total given to the customer.

Weight Rate Per Pound

>100 .50

30-100 .25

20- less 30 .20

Less 20 .10

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Weight (double) | Determine rate per pound  If (weight > 100)  Rteprlbs = .50  Else if (weight >= 30)  Rtperlbs = .25  Else if (weight >=20)  Rtperlbs = .20  Else  Rtperlbs = .10 | Rtperlbs  Weight |
|  | Calculate total  Tot = weight \* rtperlbs | tot |
|  |  |  |
|  |  |  |
|  |  |  |