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 |
| Students last name  Score | Use nested if statements to determine the letter grades  -if score >= 90  Grade = A  Else if score >= 80  Grade = b  Else if score >=70  Score = 70  Else if score >= 60  Grade = d  Else  Grade = f | Display last name and letter 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 |
| Quantity in pounds | * Determine price per pound   If pounds > 50  If pounds > 100  Price per pound = 0.10  Else  Price per pound = 0.25  Else  Price per pound = 0.50   * Calulate the total   Pounds \* priceperpound | Display the price per pound and total. |

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 |
| Last name employee  Hour worked  Job code | Determine pay rate by using nested if statements  If job code == E || job code == e  Payrate = 25.00;  Else if job code == J|| jobcode == j  Pay rate = 20.00;  Else if jobcode == A || jobcode == a  Payrate = 15.00  Else  Return 1   * Calculate the total pay: hours worked \* payrate | * Display last name, hours worked, pay rate, and total pay |

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 |
| Annual salary | * Determine tax rate   if (salary >= 50000)  if (salary > 100000)  taxRate = 0.40;  else  taxRate = 0.35;    else  taxRate = 0.25;     * Multiply salary by rate to get tax amount | Display salary, tax rate and tax amount. |

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 in pounds | Determine rate  if (weight >= 20)  if (weight >= 30)  if (weight > 100)  rate = 0.50;  else  rate = 0.25;    else  rate = 0.20;    else  rate = 0.10; | display the weight, rate and total given to the customer. |