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 | Determine their letter grade with their score. Will be using nested if statement | lname |
| score | if (score>= 90) //For A | lettergrade |
|  | Else if (score< 90 && score>=80) //For B |  |
|  | Else if (score< 80 && score>=70) //For C |  |
|  | Else if (score< 70 && score>=60 //For D |  |
|  | Else //For F |  |

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 | First determine the weight to figure out which calculation to use to find out the total cost | priceperlbs |
|  | If (lbs>100)  lbs\*.10=cost  priceperlbs=.1 | cost |
|  | Else if(lbs<=100 && lbs >= 50)  lbs\*.25=cost  priceperlbs=.25 |  |
|  | else  lbs\*.50=cost  priceperlbs=.5 |  |

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 | hrs\*prate=total  take in their code and hours. use if statements to give prate a valule. Then calculate total | lname |
| hrs | if(jcode=E)  prate=25  total=hrs\*prate | hrs |
| jcode | else if(jcode=J)  prate=20  total=hrs\*prate | prate |
|  | else if(jcode=A)  prate=15  total=hrs\*prate | total |
|  | Else  Tell them to enter they did not enter a vaild job code |  |

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 |
| salary | Take in their salary to see what their Tax rate will be | salary |
|  | taxowed= salary\*taxrate | taxrate |
|  | if(salary>100000)  taxrate=.40 | taxowed |
|  | else if(salary<=100000 && salary>=50000)  taxrate=.35 |  |
|  | else  taxrate=.25 |  |

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 |
| lbs | Take in their weight to see what their rate is.  total=lbs\*rate | lbs |
|  | if(lbs>100)  rate=.5 | rate |
|  | else if(lbs<=100 && lbs>=30)  rate=.25 | total |
|  | else if(lbs<30 && lbs>=20)  rate=.20 |  |
|  | else  rate=.10 |  |