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 |
| last\_name | If score >= 90 then A  If not proceed below. | Letter grade associated with the input score |
| score | If score >=80 then B  If not proceed below |  |
|  | If score >= 70 then C  If not proceed below |  |
|  | So on and so fort. |  |
|  |  |  |

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

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| --- | --- | --- |
| Input | Process | Output |
| lb\_quantity | If lb\_quant > 100 then .10  If not, proceed below | price\_per\_lb |
|  | If lb\_quant > 50 then .25  If not, proceed below |  |
|  | If lb\_quant < 50 then .50 |  |
|  |  |  |
|  |  |  |

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 | If job\_code = E then 25/h | last\_name |
| hours\_worked | If job\_code = J then 20/h | hours\_worked |
| job\_code | If job\_code = A then 15/h | job\_code |
|  | Else if = none | total |
|  |  |  |

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 | If salary > 100k = 40% tax | salary |
|  | If salary => 50k = 35% tax | tax\_rate |
|  | If salary < 50k = 25% tax | 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 | If weight >= 100 = .50r/p | weight |
|  | If weight >= 30 = .25r/p | rate |
|  | If weight >= 20 = .20r/p | total |
|  | Else = .10r/p |  |
|  |  |  |