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 | Allow user to enter values for last name and score | Grade for LAST NAME is GRADE |
| Score | Create IF statements for chart above |  |
| Grade | If score >= 90  Grade = A |  |
|  | If score >= 80  Grade = B |  |
|  | Etc |  |

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 |
| Quantity | Allow user to enter value for pounds | Price per pound: PPP |
| Price per pound | Create IF/ELSE statement | Total: TOTAL |
| Total | If LBS is over 100, ppp is .10  if LBS is 50 or more, ppp is .25  if LBS is under 50, ppp is .50 |  |
|  | Total = quantity \* PPP |  |

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 | Allow user to enter values for name, hours and code | Paycheck for: LAST NAMe  Hours worked: HOURS |
| Hours | Create if statement  If code = E, pay rate is $25  If code = J, pay rate is $20  If code = A, pay rate is $15 | Pay rate: RATE  Total: TOTAL |
| Code | Total = hours \* rate |  |
| Rate |  |  |
| 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 | Enter values for salary | Salary: SALARY |
| Tax rate | Create IF statement  If salary is over 100,000, tax rate is 40% | Tax rate: TAXRATE  Tax amount: TAX AMOUNT |
| Tax | If salary is 50,000 or higher, tax rate is 25% |  |
|  | If Salary is under 50,000, tax rate is 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 |
| Weight | Enter value for weight | Weight: WEIGHT |
| Rate per pound | Create if statement  If weight is over 100, rate is .50 per pound | Rate per pound: RATE PER POUND |
| Total | If weight is 30 or more, rate is .25 per pound | Total: TOTAL |
|  | If weight is 20 or more, rate is .20 per pound |  |
|  | If weight is 20 or less, rate is .10 per pound |  |