

Graded Tasks

Lab Task 1

Draw a flow chart that prompts the user to enter a weight in pounds and height in inches and then displays the BMI. **Note** that one pound is 0.45359237 kilograms and one inch is 0.0254 meters.

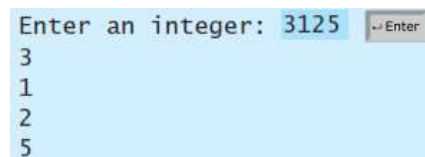
```
if bmi < 18.5 then print("Underweight")
if bmi < 25 then print("Normal")
if bmi < 30 then print("Overweight")
otherwise print("Obese")
```

Lab Task 2

Draw a flow chart that prompts the user to enter three integers and displays them in increasing order.

Lab Task 3

Draw a flow chart that prompts the user to enter a four-digit integer and displays the number in reverse order. Here is a sample run:



```
Enter an integer: 3125
3
1
2
5
```

Lab Task 4

Draw a flowchart to calculate the water bill given the cubic feet of water used for a Water Company, which charges the homeowner one of the following:

1. A flat rate of \$15.00 for usage up to and including 1000 cubic feet.
2. \$0.0175 per cubic foot for usage over 1000 cubic feet and up to and including 2000 cubic feet.
3. \$0.02 per cubic foot for usage over 2000 cubic feet and up to and including 3000 cubic feet.
4. A flat rate of \$70.00 for usage over 3000 cubic feet.

Test your flowchart with actual data.

Lab Task 5

A company that issues check-cashing cards uses an algorithm to create card numbers. The algorithm adds the digits of a four-digit number, and then adds a fifth digit of 0 or 1 to make the sum of the digits even. The last digit in the number is called the check digit. Draw a flowchart to develop a solution that accepts a four-digit number into one variable, adds the check digit, and prints the original number and the new number. Test your flowchart with the following data:

Original number = 4737 New number = 47371

And Original Number= 4631 New Number = 46310