

# CCC '08 J1 - Body Mass Index

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The Body Mass Index (BMI) is one of the calculations used by doctors to assess an adult's health. The doctor measures the patient's height (in metres) and weight (in kilograms), then calculates the BMI using the formula:

$$BMI = \frac{weight}{height \times height}$$

Write a program which prompts for the patient's height and weight, calculates the BMI, and displays the corresponding message from the table below.

| BMI Category                            | Message          |
|---|------------------|
| More than 25                            | Overweight       |
| Between 18.5<br>and 25.0<br>(inclusive) | Normal<br>weight |
| Less than 18.5                          | Underweight      |

## Sample Input 1

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```
69
1.73
```

## Output for Sample Input 1

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```
Normal weight
```

## Explanation for Output in Sample Input 1

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The BMI is  $\frac{69}{1.73 \times 1.73}$  which is approximately 23.0545. According to the table, this is a "Normal weight".

## Sample Input 2

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```
84.5
1.8
```

## Output for Sample Input 2

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Overweight

## Explanation for Output in Sample Input 2

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The BMI is  $\frac{84.5}{1.8 \times 1.8}$ , which is approximately 26.0802. According to the table, this is "Overweight".