

Exercise 1

Congratulations, you've got a job at Python Pizza. Your first job is to build an automatic pizza order program.

Based on a user's order, work out their final bill.

Small Pizza: \$15

Medium Pizza: \$20

Large Pizza: \$25

Pepperoni for Small Pizza: +\$2

Pepperoni for Medium or Large Pizza: +\$3

Extra cheese for any size pizza: + \$1

Example Input

```
size = "L"
```

```
add_pepperoni = "Y"
```

```
extra_cheese = "N"
```

Example Output

Your final bill is: \$28.

Hint

1. Think about what you've learnt about multiple if statements and see if you can reduce the number of lines of code while having the same functionality.

Exercise 2

Write a program that works out whether if a given year is a leap year. A normal year has 365 days, leap years have 366, with an extra day in February. The reason why we have leap years is really fascinating, this video does it more justice:

<https://www.youtube.com/watch?v=xX96xng7sAE>

This is how you work out whether if a particular year is a leap year.

on every year that is evenly divisible by 4 ****except**** every year that is evenly divisible by 100 ****unless**** the year is also evenly divisible by 400

e.g. The year 2000:

$2000 \div 4 = 500$ (Leap)

$2000 \div 100 = 20$ (Not Leap)

$2000 \div 400 = 5$ (Leap!)

So the year 2000 is a leap year.

But the year 2100 is not a leap year because:

$2100 \div 4 = 525$ (Leap)

$2100 \div 100 = 21$ (Not Leap)

$2100 \div 400 = 5.25$ (Not Leap)

Example Input 1

2400

Example Output 1

Leap year.

Example Input 2

1989

Example Output 2

Not leap year.

Exercise 3

Write a program that interprets the Body Mass Index (BMI) based on a user's weight and height.

It should tell them the interpretation of their BMI based on the BMI value.

- Under 18.5 they are underweight
- Over 18.5 but below 25 they have a normal weight
- Over 25 but below 30 they are slightly overweight
- Over 30 but below 35 they are obese
- Above 35 they are clinically obese.

The BMI is calculated by dividing a person's weight (in kg) by the square of their height (in m):

Warning you should round the result to the nearest whole number. The interpretation message needs to include the words in bold from the interpretations above. e.g. underweight, normal weight, overweight, obese, clinically obese.

Example Input

weight = 85
height = 1.75

Example Output

Your BMI is 28, you are slightly overweight.

$$85 \div (1.75 \times 1.75) = 27.755102040816325$$

Exercise 4

A company decided to give bonus of 5% to employee if his/her year of service is more than 5 years. Ask user for their salary and year of service and print the net bonus amount.

Exercise 5

Take values of length and breadth of a rectangle from user and check if it is square or not.

Exercise 6

A shop will give discount of 10% if the cost of purchased quantity is more than 1000. Ask user for quantity. Suppose, one unit will cost 100. Judge and print total cost for user.

Exercise 7

A school has following rules for grading system:

- a. Below 25 - F
- b. 25 to 45 - E
- c. 45 to 50 - D
- d. 50 to 60 - C
- e. 60 to 80 - B
- f. Above 80 - A

Ask user to enter marks and print the corresponding grade.

Exercise 8

Take input of age of 3 people by user and determine oldest and youngest among them.

Exercise 9

A student will not be allowed to sit in exam if his/her attendance is less than 75%.

Take following input from user

- Number of classes held
- Number of classes attended.

And print percentage of class attended

Is student is allowed to sit in exam or not.

Exercise 10

Write a program to check whether the last digit of a number(entered by user) is divisible by 3 or not.
(hint : any number % 10 will return the last digit)