More Exercise: Basic Syntax, Conditional Statements and Loops

Problems for exercises and homework for the "Programming Fundamentals" course @ SoftUni.

You can check your solutions in Judge.

1. Sort Numbers

Read three real numbers and sort them in descending order. Print each number on a new line.

Examples

Input	Output
2 1 3	3 2 1
-2 1 3	3 1 -2
0 0 2	2 0 0

2. English Name of the Last Digit

Write a **method** that returns the **English name** of the last digit of a given number. Write a program that reads an integer and prints the returned value from this method.

Examples

Input	Output
512	two
1	one
1643	three

3. Gaming Store

Write a program that helps you buy the games. The **valid games** are the following games in this table:

Name	Price
OutFall 4	$39.99
CS: OG	$15.99
Zplinter Zell	$19.99
Honored 2	$59.99

RoverWatch	$29.99
RoverWatch Origins Edition	$39.99

On the first line, you will receive your **current balance** – a **floating-point** number in the range **[0.00…5000.00]**.

Until you receive the command "**Game Time**", you have to keep **buying games**. When a **game** is **bought**, the user's **balance** decreases by the **price** of the game.

Additionally, the program should obey the following conditions:

- If a game the user is trying to buy is **not present** in the table above, print "**Not Found**" and **read the next line**.
- If at any point, the user has **$0** left, print "**Out of money!**" and **end the program**.
- Alternatively, if the user is trying to buy a game that they **can't afford**, print "**Too Expensive**" and **read the next line**.

When you receive "**Game Time**", **print** the user's **remaining money** and **total spent on games**, **rounded** to the **2nd decimal place**.

Examples

Input	Output
120 RoverWatch Honored 2 Game Time	Bought RoverWatch Bought Honored 2 Total spent: $89.98. Remaining: $30.02
19.99 Reimen origin RoverWatch Zplinter Zell Game Time	Not Found Too Expensive Bought Zplinter Zell Out of mo-ney!
79.99 OutFall 4 RoverWatch Origins Edition Game Time	Bought OutFall 4 Bought RoverWatch Origins Edition Total spent: $79.98. Remaining: $0.01

4. Reverse String

Write a program that reverses a string and prints it on the console.

Examples

Input	Output
Hello	olleH
SoftUni	inUtfoS
1234	54321

5. Messages

Write a program that emulates **typing an SMS**, following this guide:

1	**2** abc	**3** def
4 ghi	**5** jkl	**6** mno
7 pqrs	**8** tuv	**9** wxyz
	0 space	

Following the guide, **2** becomes "**a**", **22** becomes "**b**" and so on.

Examples

Input	Output
5 44 33 555 555 666	hello

Input	Output
9 44 33 999 0 8 44 33 777 33	hey there

Input	Output
7 6 33 33 8 0 6 33	meet me

Hints

- A native approach would be just putting all the possible combinations of digits in a giant **`switch`** statement.
- A cleverer approach would be to come up with a **mathematical formula** that **converts** a **number** to its **alphabet** representation:

Digit	2	3	4	5	6	7	8	9
Index	0 1 2	3 4 5	6 7 8	9 10 11	12 13 14	15 16 17 18	19 20 21	22 23 24 25
Letter	a b c	d e f	g h i	j k l	m n o	p q r s	t u v	w x y z

- Let's take the number **222** (**c**), for example. Our algorithm would look like this:
  - Find the **number of digits** the number has "e.g. **222** -> **3 digits**"
  - Find the **main digit** of the number "e.g. **222** -> **2**"
  - Find the **offset** of the number. To do that, you can use the formula: **`(main digit - 2) * 3`**
  - If the main digit is **8 or 9**, we need to **add 1** to the **offset** since the digits **7** and **9** have **4 letters each**
  - Finally, find the **letter index** (a -> 0, c -> 2, etc.). To do that, we can use the following formula: **`(offset + digit length - 1)`**.
  - After we've found the **letter index**, we can just add that to **the ASCII code** of the lowercase letter "**a**" (97)