Exercise: Simple and Complex Conditional Statements

Test your solutions in the **judge system**: https://judge.softuni.org/Contests/4400

1. Number Type

Write a program that:

- Reads **an integer number** from the console
- Based on the given number:
  - Print "**negative**", if the number **is lower than zero**
  - Print "**positive** ", if the number **is bigger than zero**
  - Print "**zero** ", if the number **is equals to zero**

Example

Input	Output
2	positive

Input	Output
-1	negative

Input	Output
0	zero

2. ATM

Write a program to **simulate an ATM withdrawal**:

- Reads **3 integer numbers** which represents the following values: **balance, withdraw** and **limit**
- Based on the given input parameters:
  - Print "**The withdraw was successful.**", if the balance **is enough**
  - Print "**The limit was exceeded.**", if the limit is exceeded
  - Print "**Insufficient availability.**", if the balance isn't enough

Example

Input	Output
420 20 25	The withdraw was successful.

Input	Output
10 50 20	The limit was exceeded.

Input	Output
10 20 30	Insufficient availability.

Input	Output
560 10 35	The withdraw was successful.

3. Biggest of Five Numbers

Write a program to **find the biggest among 5 numbers**:

- Reads **5 integer numbers** from the console
- Print the biggest number from the given five

Note: There will not be equal numbers given.

Example

Input	Output
1 2 3 4 5	5

Input	Output
10 50 20 30 40	50

4. Number Operations

Write a program to **evaluate operations**, which:

- Reads **2 real numbers** and **math operator (string)** from the console
- Possible given values for the math operator are: **"+", "-", "*", "/"**
- Apply the operator with given numbers
- Print output in the following format, where **`result`** is formatted to the **second digit**:
  `"{N1} {operator} {N2} = {result}"`

Example

Input	Output
10 12 +	10 + 12 = 22.00

Input	Output
22 9 -	22 - 9 = 13.00

Input	Output
7.6 8.2 *	7.6 * 8.2 = 62.32

Input	Output
56 10 /	56 / 10 = 5.60

5. Vacation Expenses

Write a program, which **calculates vacation expenses**:

- From the console read: **season (string)**, **accommodation type (string)** and **count of the days (integer)**
  - **Season** will be one of the following: **`"Spring"`, `"Summer"`, `"Autumn"`** and **`"Winter"`**
  - **Accommodation type** will be one of the following: **`"Hotel"`** and **`"Camping`**
- Based on the table below, you **have to calculate expenses** for the vacation with the given **accommodation type, season** and **count of the days.**
- For the calculation: use **price per night (extracted from the table below) multiplied by count of the days.**
- Print the total expenses, formatted to the **second digit** after the decimal point

Season	Hotel	Camping	Discount
Spring	30	10	20%
Summer	50	30	0%
Autumn	20	15	30%
Winter	40	10	10%

Example

Input	Output	Comments
Winter Hotel 5	180.00	Season is Winter, accommodation type is Hotel Based on table, price per night is 40, and the discount is 10% or 0.10 Total expenses = 5 * 40 - 10% = 200 - 10% = 180.00
Summer Camping 10	300.00	Season is Summer, accommodation type is Camping Based on table, price per night is 30, and the discount is 0% Total expenses = 10 * 30 = 300

6. Product of Three Numbers

Write a program that calculates the **sign of the product of three numbers**:

- Reads **3 real numbers** from the console
- Print the sign of the product of the three given numbers: **"positive"**, **"negative"** or **"zero"**

Note: Try to do this without multiplying the numbers.

Example

Input	Output
2 3 -1	negative

Input	Output
-3 -4 5	positive

Input	Output
0 4 5	zero

7. Working Hours

Write a program that **checks if the company's office is open**:

- Reads **an hour of the day (integer number)** and **a day of the week (string)**
- The office's **working hours are from 10 AM to 6 PM, Monday through Saturday**, inclusive.
  - Print **"open", if the office is open in the given hour and day of the week**
  - Print **"closed", if the office is closed in the given hour and day of the week**

Example

Input	Output
11	open

Input	Output
19	closed

Input	Output
11	closed

Monday		Friday		Sunday	

8. Fruit or Vegetable

Write a program that:

- Reads a **product (string)** from the console
- Based on type of the given product, print:
  - If product is one of following "**banana**", "**apple**", "**kiwi**", "**cherry**" or "**lemon**" you have to print "**fruit**"
  - If product is one of following "**cucumber**", "**pepper**" or "**carrot**" you have to print "**vegetable**"
  - If the product is different from listed products above, print "**unknown**"

Example

Input	Output
banana	fruit

Input	Output
pepper	vegetable

Input	Output
table	unknown

9. Sum Seconds

Three athletes finish in a certain number of seconds (between 1 and 50).

Write a program that:

- Read **three integers - the athletes' times in seconds**, from console
- Calculate their total time in the format "**minutes:seconds**"

Note: The seconds should be displayed **with leading zero** (2 as "02", 7 as "07", 35 as "35").

Example

Input	Output
35 45 44	2:04

Input	Output
22 7 34	1:03

Input	Output
50 50 49	2:29

10. Summer Outfit

Summer weather can be quite unpredictable, and Victor needs your assistance. Write a program that, **based on the time of day** and the **temperature**, recommends to Victor **what clothes to wear**. Your friend has **different plans for each stage of the day** that require varied clothing, as indicated in the table.

Two lines are read from the console:

- **Temperature - an integer in the range [10... 42]**
- **Text, time of day - with possibilities - "Morning", "Afternoon", "Evening"**

Time of day / degrees	Morning	Afternoon	Evening

10 <= temperature <= 18	Clothing = Sweatshirt Shoes = Sneakers	Clothing = Shirt Shoes = Moccasins	Clothing = Shirt Shoes = Moccasins
18 < temperature <= 24	Clothing = Shirt Shoes = Moccasins	Clothing = T-Shirt Shoes = Sandals	Clothing = Shirt Shoes = Moccasins
temperature >= 25	Clothing = T-Shirt Shoes = Sandals	Clothing = Swim Suit Shoes = Barefoot	Clothing = Shirt Shoes = Moccasins

Print on the console on a single line: "It's {temperature} degrees, get your {clothing} and {shoes}."

Example

Input	Output	Comments
16 Morning	It's 16 degrees, get your Sweatshirt and Sneakers.	In the morning, when the degrees are 16, Victor takes a sweatshirt and sneakers.

Input	Output	Input	Output
22 Afternoon	It's 22 degrees, get your T-Shirt and Sandals.	28 Evening	It's 28 degrees, get your Shirt and Moccasins.

Guidelines

1. Read the **input data from the console** and initialize two variables **outfit** and **shoes** of type **"string"**, with initial value **""**.

```
int degrees = int.Parse(Console.ReadLine());
string timeOfDay = Console.ReadLine();
string outfit = "";
string shoes = "";
```

2. Check the temperature using **logical operator "and" (&&)**. Example: **"degrees >= 10 && degrees <= 18"** Within the temperature check, consider the time of the day: **Morning, Afternoon, Evening** by changing the value of the variables "**outfit, shoes**" **for each stage of the day**.

```
if (degrees >= 10 && degrees <= 18)
{
    if (timeOfDay == "Morning")
    {
        outfit = "Sweatshift";
        shoes = "Sneakers";
    }
    else if (timeOfDay == "Afternoon" || timeOfDay == "Evening")
    {
        outfit = "Shirt";
        shoes = "Moccasins";
    }
}
```

3. Print the result on the console following the format outlined in the task description.

```
Console.WriteLine($"It's {degrees} degrees, get your {outfit} and {shoes}.");
```