## Problem 2 – Chessboard Game

Goshko is a keen chess player. One day he was bored with his work and decided to take a break and create a game using the chessboard. He takes a string, e.g. "Software University\_2345", converts its symbols to numbers through **their ASCII codes** and fills a chessboard with them. He takes the values of **capital and small letters and digits** only. The value of **any other symbol** is **zero**. He fills the board’s squares with the numbers, from left to right and from top to bottom (see the example below). **The size of the chessboard is n\*n (e.g. n = 5) and it always starts with a black square**. **N** will always be an **odd number**.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S | o | F | t | w |  | 83 | 111 | 102 | 116 | 119 |
| a | r | E |  | U |  | 97 | 114 | 101 | 0 | 85 |
| n | i | V | e | r |  | 110 | 105 | 118 | 101 | 114 |
| s | i | T | y | \_ |  | 115 | 105 | 116 | 121 | 0 |
| 2 | 3 | 4 | 5 |  |  | 50 | 51 | 52 | 53 | 0 |

Let’s assume that there are two competing teams: the **black team** and the **white team**. Every team’s **score** is the **sum of the values in its squares**. However if a square contains a **capital letter** its value should be **given to the opposing team**. In the example above the scores are calculated as follows:

**White Team** Score = 83 'S' + 111 'o' + 116 't' + 97 'a' + 101 'e' + 105 'i' + 101 'e' + 115 's' + 116 't' + 51 '3' + 53 '5' = 1049  
**Black Team** Score = 102 'f' + 119 'w' + 114 'r' + 85 'U' + 110 'n' + 118 'v' + 114 'r' + 105 'i' + 121 'y' + 50 '2' + 52 '4' = 1090.

### Input

The input data should be read from the console.

* The **first line** holds the **size n** of the chessboard.
* The **second line** holds the input string.

The input data will always be valid and in the format described. There is no need to check it explicitly.

### Output

The output should be printed on the console.

* The first output line holds the **winning team** in format: “The winner is: **{name}** team”.
* The second line holds the difference between the scores of the winning and the losing team.
* In case the score is **equal**, print “Equal result: **{points}**”. Do not print the difference in this case!

### Constraints

* The number **n** will be an **odd** **integer** in the range [1 … 9].
* Allowed working time for your program: 0.1 seconds. Allowed memory: 16 MB.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5  Software University\_2345 | The winner is: black team  41 |

|  |  |
| --- | --- |
| **Input** | **Output** |
| 3  Aa | Equal result: 97 |