Assignment 2: The Cases of Characters

2.1 Comparing Characters

Since `char` is a subtype of `int`, you may compare `char` values using comparison operators (<, >, <=, and >=). The equality operators (== and `!=`) can also be used for char values. Fortunately, the collating sequence of English alphabets is in the lexicographic order. For example, `'A'` is less than `'B'` and `'Z'` is greater than `'Y'`. The order of characters holds in a single case category; `'a'` is not less than `'B'` since `'a'` is in small case but `'B'` is in capital.

The following shows a sample program comparing the characters.

```c
#include <stdio.h>

int main()
{
    char c1 = 'A', c2 = 'B', c3 = 'a';

    if (c1 < c2)
        printf("'%c' < '%c'\n", c1, c2);
    else
        printf("'%c' >= '%c'\n", c1, c2);

    if (c2 < c3)
        printf("'%c' < '%c'\n", c2, c3);
    else
        printf("'%c' >= '%c'\n", c2, c3);

    if (c3 < c1)
        printf("'%c' < '%c'\n", c3, c1);
    else
        printf("'%c' >= '%c'\n", c3, c1);

    return 0;
}
```

2.2 Programming Assignment 2: cases.c

Write a program to read a character c and print the next character if c is capital or the previous character if it is not. Assume that the next character of `'Z'` is `'A'` and the previous character of `'a'` is `'z'`.

The input consists of a single line containing an alphabet c. Depending on the case of c, your program should print the next or the previous character to the standard output.

Input	**Output**
B	C
y	x
a	z