```c
#include <stdio.h>

// Rotate among odd locations in the alphabet
void oddrotate(int a, char map[]){
    char b[26];
    for(int i = 0; i < 13; i++){
        b[i] = map[2*i];
        b[13 + i] = map[2*i];
    }

    for(int i = 0; i < 13; i++)
        map[2*i] = b[13 - a + i];
}

// Rotate among even locations in the alphabet
void everotate(int a, char map[]){
    char b[26];
    for(int i = 0; i < 13; i++){
        b[i] = map[2*i + 1];
        b[13 + i] = map[2*i + 1];
    }

    for(int i = 0; i < 13; i++)
        map[2*i + 1] = b[13 - a + i];
}

void reverse(char map[]){
    for(int i=0; i<13; i++){
        char temp = map[i];
        map[i] = map[25-i];
        map[25-i] = temp;
    }
}

void printmap(char *map){
    for(int i = 0; i < 26; i++)
        printf("%c", map[i]);
    printf("\n");
}

int main(){
    int K;
    scanf("%d\n", &K);

    int ER = K%10;
    K = K/10;
    int OR = K;

    char map[26];
    for(int i=0; i<26; i++){
        map[i] = 'A' + i;
    }

    oddrotate(OR, map);
    everotate(ER, map);
    printmap(map);
    reverse(map);
    printmap(map);

    char c = (char)getchar();
    while(c != EOF){
        if(c == ' '){
            printf("%c", c);
        }
        else{
            int m = c - 'A';
            printf("%c", map[m]);
        }
        c = getchar();
```

```
    }
    return 0;
}
```