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Ans 5

```c
#include <stdio.h>
#include <conio.h>
#include <string.h>
#include <ctype.h>
#define mx 5
    int choice;
    void play fair (chan ch1, chan ch2, chan key (mx)(mx)) {
        int i, j, w, y, z;
        for (i=0; i<mx; i+r) {
            for (j=0; j<mx; j+r) {
                if (ch1 == key (i)(j)) {
                    w = i;
                    x = j;
                }
                else if (ch2 == key (i)(j)) {
                    y = i;
                    z = j;
                }
            }
        }
        if (w == y) {
            if (choic == -1) {
                x = (x+1) % 5;
                z = (z+1) % 5;
            }
```

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else {
    x = ((x-1) % s+s) % s;
    z = ((z-1) % s+s) % s.
}
Printf("%c %c", key [w][x], key[y][z]);
} else if (x == z) {
    if (choice == 1) {
        w = (w+1) % s;
        y = (y+1) % s;
    }
    else
        w = ((w-1) % s+s) % s;
        y = ((y-1) % s+s) % s;
}
    Printf("%c %c", key[w][x], key[y][z]);
}
else {
    Printf("%c %c", key[w][z], key[y][x]);
}
void removeDuplicates (char str[]) {
    int hash[256] = {0};
    int countIndex = 0;
    int last uniqueIndex = 0;
    while (*(str + countIndex)) {
        char temp = *(str + countIndex);
        if (0 == hash[temp]) {
            hash[temp] = 1;
            *(str + last uniqueIndex) = temp;
            last uniqueIndex++;
```

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    }
    current_index++;
    }
    *(str+last+uniqueindex) = '\0';
    }

    void main(){
        int i, j, K = 0, 1, m = 0, n;
        char key[MX][MX], keyminu[25], keystr(10), str(25)={
    };
        0

        char alpa(26) ={
            'A' - - - - - - - 'T'};

    printf("\n1. encryption\n2.Decryption\n\nchoice (1 or 2);");
    scanf("%d", &chow);
    if (chow=1 && chow!=2) { printf("Invalid choice); retu;}
    fflush(stdin);
    printf("\nEnter key");
    gets(keystr);
    printf(" Enter the text:");
    gets(str);
    printf("\n");

    printf("\nEnter text : %s \n Output Text:" str
    playfair(str(2), str(i+1), key);
        i++;
    }
    if (chow=2) printf("Random unused x)");
    }
```