

OPERATING SYSTEM

[LAB Homework Q1]

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Code:

```
#include <stdio.h>

int main(int argc, char *argv[]) {
    char All_letters[] = "abcdefghijklmnopqrstuvwxyz"; // Array containing all the letters
    int L1, L2, L3, L4; // Letters' indices in the array

    // Choose the first letter
    for (L1 = 0; L1 < 26; ++L1) {

        // Iterate through all the letters after the first letter
        // Choose the second letter
        for (L2 = 0; L2 < 26; ++L2) {
            if (L1 == L2) {
                continue; // Skip if the second letter is the same as the first letter
            }

            // Iterate through all the letters after the second letter
            // Choose the third letter
            for (L3 = 0; L3 < 26; ++L3) {
                if (L1 == L3 || L2 == L3) {
                    continue; // Skip if the third letter is the same as the first or
second letter
                }

                // Iterate through all the letters after the third letter
                // Choose the fourth letter
                for (L4 = 0; L4 < 26; ++L4) {
                    if (L1 == L4 || L2 == L4 || L3 == L4) {
                        continue; // Skip if the fourth letter is the same as any of the
previous letters
                    }

                    printf("%c%c%c%c\n", All_letters[L1], All_letters[L2],
All_letters[L3], All_letters[L4]);
                }
            }
        }
    }

    return 0;
}
```

Output:

```
zywq  
zywr  
zyws  
zywt  
zywu  
zywv  
zywx  
zyxa  
zyxb  
zyxc  
zyxd  
zyxe  
zyxf  
zyxg  
zyxh  
zyxi  
zyxj  
zyxk  
zyxl  
zyxm  
zyxn  
zyxo  
zyxp  
zyxq  
zyxr  
zyxs  
zyxt  
zyxu  
zyxv  
zyxw  
user1@lamp ~/LHW./a.out | wc -l  
358800  
user1@lamp ~/LHW$
```