

6. Write a program in C to print all permutations of a given string using pointers

```
#include <stdio.h>

#include <string.h>

void swap (char *x, char *y)

{

    char temp;

    temp = *x;

    *x = *y;

    *y = temp;

}

void permute(char *a, int i, int n)

{

    int j;

    if (i == n)

        printf("%s\n", a);

    else {

        for (j = i; j <= n; j++)

        {

            swap((a + i), (a + j));

            permute(a, i + 1, n);

            swap((a + i), (a + j));

        }

    }

}

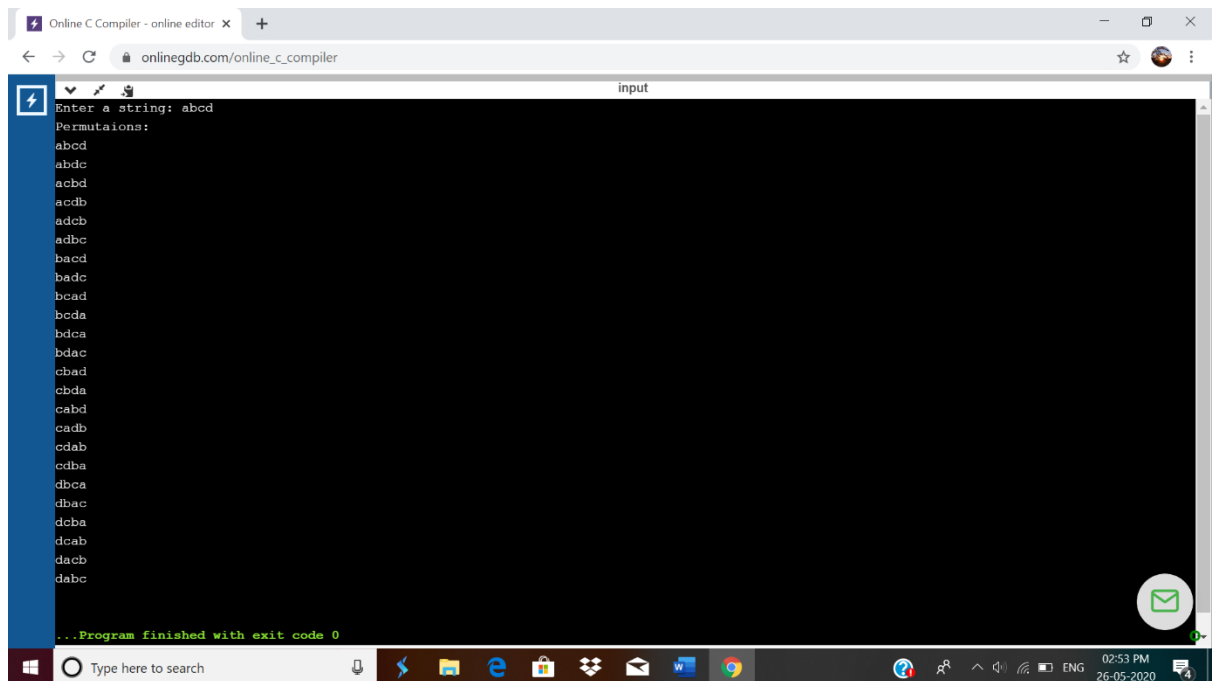
int main()

{

    char a[20];
```

```
int n;  
  
printf("Enter a string: ");  
  
scanf("%s", a);  
  
n = strlen(a);  
  
printf("Permutaions:\n");  
  
permute(a, 0, n - 1);  
  
getchar();  
  
return 0;  
  
}
```

Output:



The screenshot shows a web browser window with the URL `onlinegdb.com/online_c_compiler`. The browser's address bar and tabs are visible at the top. The main content area is a dark-themed terminal window titled "input". The terminal displays the following text:

```
Enter a string: abcd  
Permutaions:  
abcd  
abdc  
acbd  
acdb  
adcb  
adbc  
bacd  
badc  
bcad  
bcda  
bdca  
bdac  
cbad  
cbda  
cabd  
cadb  
cdab  
cdba  
dbca  
dbac  
dcba  
dcab  
dacb  
dabc  
...Program finished with exit code 0
```

The terminal output lists all 24 permutations of the string "abcd". At the bottom of the terminal, a green message indicates that the program finished with exit code 0. The Windows taskbar is visible at the bottom of the screen, showing the search bar and various application icons.