Open | test25.cpp ~/Documents/FDS | Save

```cpp
#include<iostream>
#include<string.h>
#define max 50
using namespace std;

class STACK
{
        private:
                char a[max];
                int top;

        public:
                STACK()
                {
                        top=-1;
                }

                void push(char);
                void reverse();
                void convert(char[]);
                void palindrome();
};

void STACK::push(char c)
{
        top++;
        a[top] = c;
        a[top+1]='\0';

        cout<<endl<<c<<" is pushed on stack ...";
}

void STACK::reverse()
{
        char str[max];

        cout<<"\n\nReverse string is : ";

        for(int i=top,j=0; i>=0; i--,j++)
```

C++ | Tab Width: 8 | Ln 3, Col 9 | INS

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```cpp

        for(int i=top,j=0; i>=0; i--,j++)
        {
                cout<<a[i];
                str[j]=a[i];
        }

        cout<<endl;
}


void STACK::convert(char str[])
{
        int j,k,len = strlen(str);

        for(j=0, k=0; j<len; j++)
        {
                if( ( (int)str[j] >= 97 && (int)str[j] <=122 ) || ( (int)str[j] >= 65 && (int)str[j] <=90 ))
                {
                        if( (int)str[j] <=90 )
                        {
                                str[k] = (char)( (int)str[j] + 32 );
                        }else
                        {
                                str[k] = str[j];
                        }

                        k++;
                }
        }
        str[k]='\0';

        cout<<endl<<"Converted String : "<<str<<"\n";
}

void STACK::palindrome()
{
        char str[max];
        int i,j;
```

C++ | Tab Width: 8 | Ln 76, Col 1 | INS

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```
76          int i,j;
77
78          for(i=top,j=0; i>=0; i--,j++)
79          {
80                  str[j]=a[i];
81          }
82          str[j]='\0';
83
84
85          if(strcmp(str,a) == 0)
86                  cout<<"\n\nString is palindrome...";
87          else
88                  cout<<"\n\nString is not palindrome...";
89  }
90
91
92  int main()
93  {
94          STACK stack;
95
96          char str[max];
97          int i=0;
98
99          cout<<"\nEnter string to be reversed and check is it palindrome or not : \n\n";
100
101         cin.getline(str , 50);
102
103         stack.convert(str);
104
105         while(str[i] != '\0')
106         {
107                 stack.push(str[i]);
108                 i++;
109         }
110
111         stack.palindrome();
112
113         stack.reverse();
114 }
```

C++ Tab Width: 8 Ln 76, Col 1 INS

onkar@ubuntu: ~/Documents/FDS

```
onkar@ubuntu:~$ cd Documents/FDS
onkar@ubuntu:~/Documents/FDS$ g++ test25.cpp
onkar@ubuntu:~/Documents/FDS$ ./a.out

Enter string to be reversed and check is it palindrome or not :

nayan

Converted String : nayan

n is pushed on stack ...
a is pushed on stack ...
y is pushed on stack ...
a is pushed on stack ...
n is pushed on stack ...

String is palindrome...

Reverse string is : nayan
onkar@ubuntu:~/Documents/FDS$
```