A palindrome is a string of character that‘s the same forward and backward. Typically, punctuation, capitalization, and spaces are ignored. For example, “Poor Dan is in a droop” is a palindrome, as can be seen by examining the characters “poor danisina droop” and observing that they are the same forward and backward. One way to check for a palindrome is to reverse the characters in the string and then compare with them the original-in a palindrome, the sequence will be identical. Write C++ program with functions-

a) To print original string followed by reversed string using stack

b) To check whether given string is palindrome or not

```
#include<iostream>
#include<string.h>
#define max 50
using namespace std;
char a[max];
int tos=-1;

void push(int c)
{
   if(tos==max-1)
   cout<<"stack is full";
   else
   {
          tos++;
          a[tos] = c;
          a[tos+1]='\0';
   }
}
```

```
void reverse()
{
	char str[max];

	cout<<"\nReverse string is : ";

	for(int i=tos; i>=0; i--)
	{
		cout<<a[i];
	}

}

/*
void 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";
}




*/
int palindrome()
{
        //char str[max];
        int i,j;

        for(i=tos,j=0;i>=(tos/2),j<=(tos/2);i--,j++)
        {
                if(a[i]!=a[j])
                return 0;
                else
                 return 1;
        }
```

```
}



int main()
{
   int a;
   int i=0;
          char str[max];
          cout<<"\nEnter string for checking reversed and palindrome :";


          cin.getline(str , 50);


//        stack.convert(str);


          while(str[i] != '\0')
          {
            push(str[i]);
                    i++;
          }


          a=palindrome();
                    if( a== 1)
                    cout<<"\n\nString is palindrome...";
          else
                    cout<<"\n\nString is not palindrome...";
```

```
        reverse();


}
```