

[Type here]

```
#include<std
io.h>
#include<str
ing.h> char
stack[20]; int
top,count=0;
void push()
{
    top=top+1;
    stack[top]='0';
    stack[top+1]='\0';
}
int pop()
{
    if(top
<1)
return
(0);
    else
    {
        stack[top]='\0';
        top=top-1;
        return(1);
    }
}
void main()
{
    int m,i,j,k,l,a,len;
    char input[20],rem_input[20];
    printf("Simulation of PDA for n 0's followed by 2n 1's\n");
    printf("Enter a string : ");
    scanf("%s",input);
    l=strlen(input);
    j=0;stack[0]='Z';top=0;
    printf("Stack\tInput\n");
    printf("%s\t%s\n",stack,input
);
    while(1)
    {
        len=strlen(input);
        while(len>0)
        {
            if(input[0]=='0')
            {
                push();
                m=0;
                for(k=1;k<len;k++)
```

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```
        {
            rem_input[m]=input[k];
            m=m+1;
        }
        rem_input[m]='\0';
        strcpy(input,rem_input);
        printf("%s\t%s\n",stack,input);
    }
    if(input[0]=='1')
    {
        count++;
    if(count%2==0)
        {
        a=pop();
        if(a==0)
            {
                printf("String not
accepted");          goto b;
            }
            else      {
                m=0;
                for(k=1;k<len;k++)
                    {
                        rem_input[m]=input[k];
                        m=m+1;
                    }
                rem_input[m]='\0';
                strcpy(input,rem_input);
                printf("%s\t%s\n",stack,input);

            }
        }
        else
        {
            m=0;
            for(k=1;k<len;k++)
                {
                    rem_input[m]=input[k];
                    m=m+1;
                }
            rem_input[m]='\0';
            strcpy(input,rem_input);
            printf("%s\t%s\n",stack,input);
        }
    }
    break;
}
j=j+1;
```

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```
        //printf("j = %d\tl = %d\n",j,l);
if(j==l)
{
break;
}
}
if(top>=1)
{
printf("String not accepted");

}
el
s
e
{
printf("String accepted");
} b:
printf("....."
);
}
```

```
Simulation of PDA for n 0's followed by 2n 1's
Enter a string : 000011111111
Stack   Input
Z       000011111111
Z0      000111111111
Z00     001111111111
Z000    011111111111
Z0000   111111111111
Z0000   11111111
Z0000   1111111
Z0000   111111
Z0000   11111
Z0000   1111
Z0000   111
Z0000   11
Z0000   1
Z
String accepted.....
Process returned 13 (0xD)   execution time : 4.912 s
Press any key to continue.
```

```
Simulation of PDA for n 0's followed by 2n 1's
Enter a string : 0001111
Stack   Input
Z       0001111
Z0      001111
Z00     01111
Z000    1111
Z000    111
Z000    11
Z000    1
Z0
String not accepted.....
Process returned 13 (0xD)   execution time : 5.739 s
Press any key to continue.
```