



IUBAT- International University of Business Agriculture and Technology

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Assignment #2

Title: Write down the program in C-language for the transition functions of push down automata which recognize the language $0^n \# 1^n$, where $n = 0, 1, 2, \dots$

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Question 5 : C program (code)

```
1 #include<stdio.h>
2 #include<string.h>
3
4 int main(){
5     int i=0,j=1,state = 1;
6     char str[20],stack[20];
7     stack[0]='$';
8     printf("\nInput String = ");
9     scanf("%s",str);
10
11     while(1){
12
13         if(state==1 and str[i]=='0'){
14             stack[j] = str[i];
15             j++;i++;
16         }else if(str[i]=='#' and state == 1){
17             i++;
18             state++;
19         }else if(str[i]=='1' and state == 2){
20             i++;
21             j--;
22         }else{
23             break;
24         }
25     }
26
27     if(stack[j-1]=='$'){
28         printf("Valid String\n");
29     }else{
30         printf("Invalid String\n");
31     }
32     return 0;
33 }
```

Test Cases

0 / 0 / 1

Add Test

Checker: Ignore trailing spaces

☒ Input #1

Run

Output #1

**

Ex

000#111

Input String = Valid String

Test Cases

0 / 0 / 1

Add Test

Checker: Ignore trailing spaces

☒ Input #1

Run

Output #1

**

I

#

Input String = Valid String

Test Cases

0 / 0 / 1

Add Test

Checker: Ignore trailing spaces

☒ Input #1

Run

Output #1

**

Ex

00#111

Input String = Invalid String

Question 7:

Conclusion: We got a clear idea about PDA and the way it works.