

IUBAT- International University of Business Agriculture and Technology

4 Embankment Drive Road, Sector 10, Uttara Model Town, Dhaka 1230

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 $n = 0, 1, 2, \ldots$

Submitted by

Name: Rakibul Hasan Dihan

ID: 20203038

Section: B

Department: BCSE

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Submitted to

Prof.Dr Ehteshamul Haque

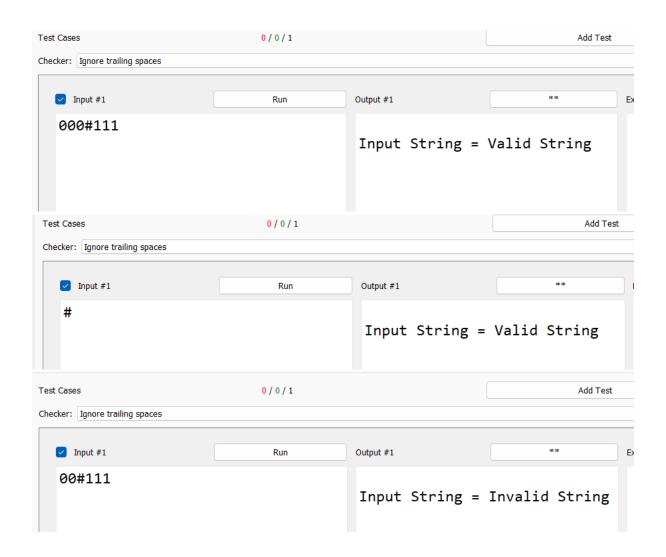
Professor MSc. (USSR), PhD (USSR)

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Question 5 : C program (code)

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



Question 7:

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