```c
#include<stdio.h>
#include<string.h>
char stack[20]; int top;
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 Pushdown Automata for 0n1n\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++)
```

```c
            {
                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')
        {
            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);
            }
        }
        break;
      }
j=j+1;
    if(j==(l))
    {
break;
    }
  }
  if(top>=1)
  {
    printf("String not accepted");

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

```
    } b:
printf("............)
; }
```

```
Simulation of Pushdown Automata for 0n1n
Enter a string : 0000011111
Stack    Input
Z        0000011111
Z0       000011111
Z00      00011111
Z000     0011111
Z0000    011111
Z00000   11111
Z0000    1111
Z000     111
Z00      11
Z0       1
Z
String accepted..............
Process returned 13 (0xD)   execution time : 6.433 s
Press any key to continue.
```

```
Simulation of Pushdown Automata for 0n1n
Enter a string : 0001111
Stack    Input
Z        0001111
Z0       001111
Z00      01111
Z000     1111
Z00      111
Z0       11
Z        1
String not accepted..............
Process returned 13 (0xD)   execution time : 6.998 s
Press any key to continue.
```