*N.Hari krishna reddy*

*192110021*

*SIMULATING TURING MACHINE(ON1N2N):*

*#include<stdio.h>*

*#include<string.h>*

*int main()*

*{*

*int i,j,le,flag,flag1,flag2;*

*char str[20];*

*printf("Program to show how a turing machine will process 0n1n2n\n");*

*printf("Enter a string : ");*

*scanf("%s",str);*

*le=strlen(str);*

*j=0; while(1)*

*{*

*flag=0;flag1=0;*

*flag2=0;i=0;*

*while(i<le)*

*{*

*if((str[i]=='0')&&(flag==0))*

*{*

*str[i] = 'A';*

*printf("%s\n",str);*

*flag=1;*

*i=i+1;*

*}*

*else if((str[i]=='0')&&(flag==1))*

*{*

*i=i+1;*

*}*

*else if(str[i]=='A')*

*{*

*i=i+1;*

*}*

*else if((str[i]=='1')&&(flag1==0))*

*{*

*str[i] = 'B';*

*printf("%s\n",str);*

*flag1=1;*

*i=i+1;*

*}*

*else if((str[i]=='1')&&(flag1==1))*

*{*

*i=i+1;*

*}*

*else if(str[i]=='B')*

*{*

*i=i+1;*

*}*

*else if((str[i]=='2')&&(flag2==0))*

*{*

*str[i] ='C';*

*printf("%s\n",str);*

*flag2=1;*

*i=i+1;*

*}*

*else if((str[i]=='2')&&(flag2==1))*

*{*

*i=i+1;*

*}*

*else if(str[i]=='C')*

*{*

*i=i+1;*

*}*

*}*

*j=j+1;*

*if(j==le)*

*{*

*break;*

*}*

*}*

*}*

A screenshot of a computer

Description automatically generated