

# LAB 9

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**Sec- 'A'**

1. Write a YACC program to accept a sequence of 0s and 1s which end and start either with 0 or 1.

## **Parser Source Code :**

```
% {  
    /* Definition section */  
    #include<stdio.h>  
    #include <stdlib.h>  
    void yyerror(const char *str)  
    {  
        printf("\nSequence Rejected\n");  
    }  
  
% }  
  
%token ZERO ONE  
/* Rule Section */  
%%  
  
r : s {printf("\nSequence Accepted\n\n");}  
;  
  
s : n
```

```
| ZERO a
| ONE b
;
```

```
a : n a
| ZERO
;
```

```
b : n b
| ONE
;
```

```
n : ZERO
| ONE
;
```

```
%%
#include"lex.yy.c"
//driver code
int main()
{
    printf("\nEnter Sequence of Zeros and Ones : ");
    yyparse();
    printf("\n");
    return 0;
}
```

### **Lexical Analyzer Source Code :**

```
{
/* Definition section */
extern int yylval;
```

```
% }

/* Rule Section */
%%

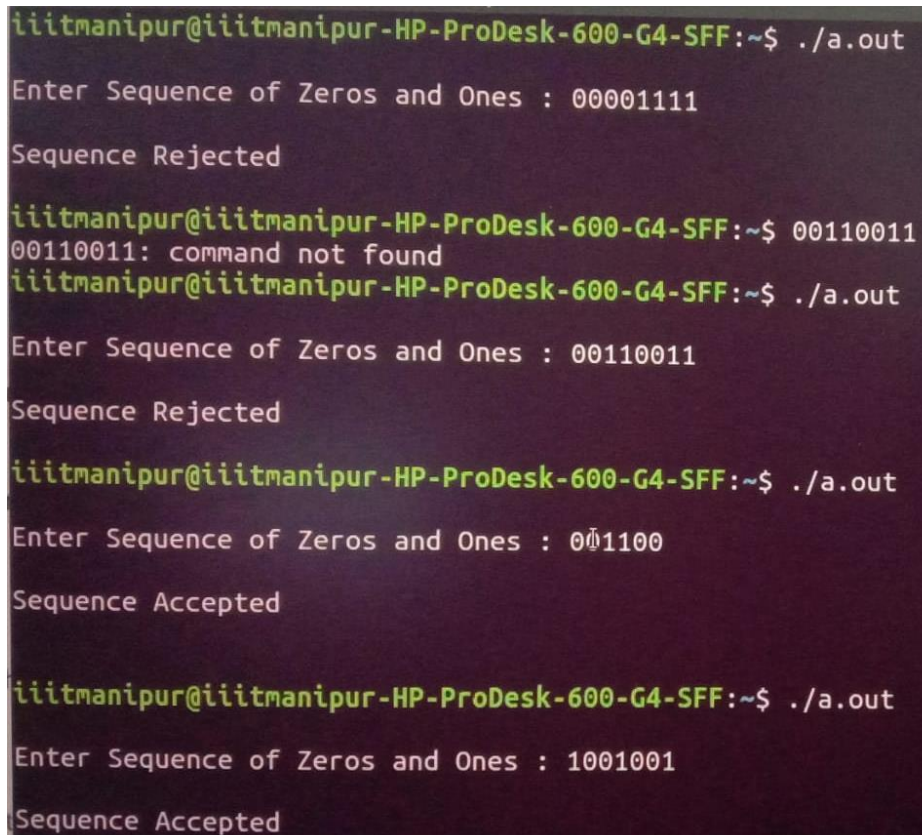
0 {yylval = 0; return ZERO;}

1 {yylval = 1; return ONE;}

.\n {yylval = 2; return 0;}

%%
```

## OUTPUT:



```
iitmanipur@iitmanipur-HP-ProDesk-600-G4-SFF:~$ ./a.out
Enter Sequence of Zeros and Ones : 00001111
Sequence Rejected

iitmanipur@iitmanipur-HP-ProDesk-600-G4-SFF:~$ 00110011
00110011: command not found
iitmanipur@iitmanipur-HP-ProDesk-600-G4-SFF:~$ ./a.out
Enter Sequence of Zeros and Ones : 00110011
Sequence Rejected

iitmanipur@iitmanipur-HP-ProDesk-600-G4-SFF:~$ ./a.out
Enter Sequence of Zeros and Ones : 001100
Sequence Accepted

iitmanipur@iitmanipur-HP-ProDesk-600-G4-SFF:~$ ./a.out
Enter Sequence of Zeros and Ones : 1001001
Sequence Accepted
```