

7a) Program to recognize the grammar ( $a^n b$ ,  $n \geq 5$ ).

**7a.l**

```
% {  
#include "y.tab.h"  
% }  
%%  
[aA] {return A;}  
[bB] {return B;}  
\n {return NL;}  
. {return yytext[0];}  
%%
```

```
int yywrap()  
{  
    return 1;  
}
```

**7a.y**

```
% {  
  
#include<stdio.h>  
#include<stdlib.h>  
% }  
  
%token A B NL  
%%  
stmt: A A A A S B NL {printf("valid string\n"); exit(0);}  
;  
S: S A  
|
```

```
;  
%%  
int yyerror(char *msg)  
{  
    printf("invalid string\n");  
    exit(0);  
}  
  
main()  
{  
    printf("enter the string\n");  
    yyparse();  
}
```

### **Commands For Execution**

```
lex 7a.l  
yacc 7a.y  
yacc -y -d 7a.y  
gcc lex.yy.c y.tab.c -o 7a.exe  
7a.exe
```

### **Output**

C:\windows\system32\cmd.exe

```
C:\Users\Prameetha\Desktop\SS\ss>7a.exe
enter the string
aaab
invalid string
```

```
C:\Users\Prameetha\Desktop\SS\ss>7a.exe
enter the string
aaaaaab
valid string
```

```
C:\Users\Prameetha\Desktop\SS\ss>7a.exe
enter the string
ababa
invalid string
```

```
C:\Users\Prameetha\Desktop\SS\ss>
```