

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

7a.i

```
% {  
  
#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 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>
```