

Ex-5-RECOGNITION-OF-THE-GRAMMAR-anb-where-n-10-USING-YACC

RECOGNITION OF THE GRAMMAR(anb where $n \geq 10$) USING YACC

Date:

Aim:

To write a YACC program to recognize the grammar anb where $n \geq 10$.

ALGORITHM

1. Start the program.
2. Write a program in the vi editor and save it with .l extension.
3. In the lex program, write the translation rules for the variables a and b.
4. Write a program in the vi editor and save it with .y extension.
5. Compile the lex program with lex compiler to produce output file as lex.yy.c. eg \$ lex filename.l
6. Compile the yacc program with yacc compiler to produce output file as y.tab.c. eg \$ yacc -d arith_id.y
7. Compile these with the C compiler as gcc lex.yy.c y.tab.c
8. Enter a string as input and it is identified as valid or invalid.

PROGRAM:

```
%{
#include "y.tab.h"
%}

%%

a    { return A; } // Recognize 'a' as token A
b    { return B; } // Recognize 'b' as token B
.    { return 0; } // End of input
%%

int yywrap() {
    return 1;
}

%{
#include <stdio.h>
int yylex(void);
void yyerror(const char *s);
%}

%token A B

%%

S    : A A A A A A A A A A B    { printf("Valid string\n"); }
    | A S B                    { printf("Valid string\n"); }
    ;
```

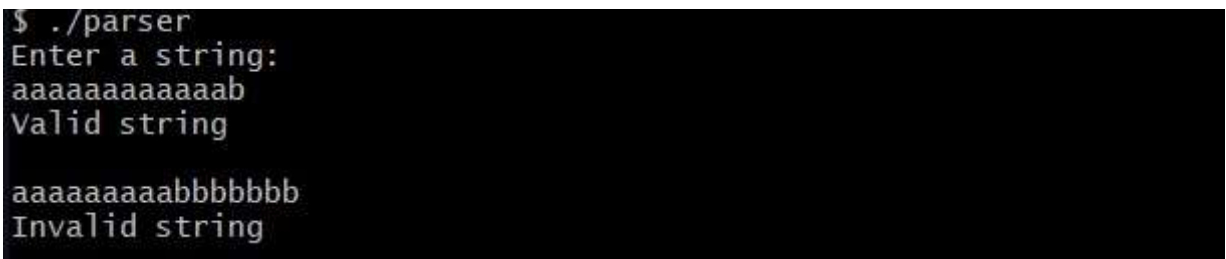


```
%%
```

```
int main() {  
    printf("Enter a string:\n");  
    yyparse();  
    return 0;  
}
```

```
void yyerror(const char *s) {  
    printf("Invalid string\n");  
}
```

OUTPUT



```
$ ./parser  
Enter a string:  
aaaaaaaaaaaab  
Valid string  
  
aaaaaaaaabbbbbbb  
Invalid string
```

RESULT

The YACC program to recognize the grammar anb where $n \geq 10$ is executed successfully and the output is verified.