Compiler Design Assignment No 4

Name: Sarthak Sanjay Pithe

PRN: 12210166

Roll No: 09

Division: D

1. All strings of lowercase letters that contain the five vowels in order.

Code:

%{

#include <stdio.h>

#include <stdbool.h>

int count = 0;

char \*string = NULL;

%}

%%

[a][^aeiou]\*[e][^aeiou]\*[i][^aeiou]\*[o][^aeiou]\*[u]\* {

count++;

string = yytext;

}

. { }

\n { }

%%

int main() {

yylex();

if (count == 1) {

printf("The string: %s does contains the sequence 'aeiou' in order.\n",string);

} else if(count>1){

printf("The string contains more than one 'aeiou' sequence in order.\n");

} else{

printf("The string does not contains the sequence 'aeiou' in order.\n");

}

return 0;

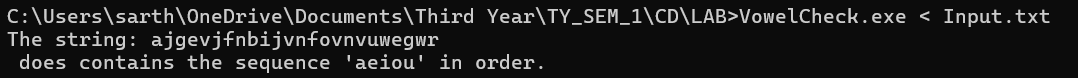
}

int yywrap() {

return 1;

}

Output:

1) ajgevjfnbijvnfovnvuwegwr 

2) aeioufbbfvaeiou 

3) dfbnbihirgbfkn 

1. All strings of a's and b's with an even number of a's and an odd number of b's.

Code:

%{

#include <stdio.h>

#include <stdlib.h>

int count[2];

void reset\_count() {

count[0]=0;

count[1]=0;

}

void print\_validity(){

if(count[0]%2==0 && count[1]%2!=0){

printf("Valid String contains even 'a' and odd 'b'\n");

} else{

printf("Invalid String\n");

}

}

%}

%%

a { count[0]++; }

b { count[1]++; }

. { }

\n {

print\_validity();

reset\_count();

}

%%

int main() {

yylex();

return 0;

}

int yywrap() {

return 1;

}

Output:

1. ababaabbaba



2) ababaabbababa

