EXP NO: 05

DATE: - -2022

ASSIGNMENT 5

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Aim:

To solve the lex problems.

1.) Construct a DFA that accepts all the words of a & b with exactly 2 a's

Code:

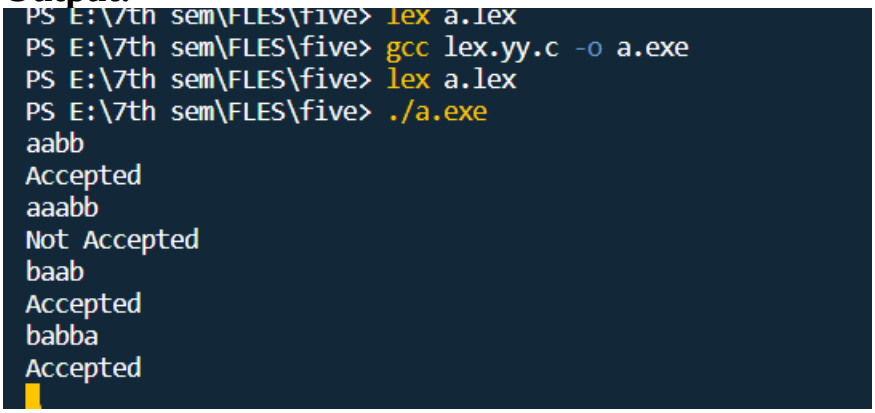
```
%{
   #include <stdio.h>

%}

%%
(b*ab*ab*) {
   printf("Accepted");}
.+ { printf("Not Accepted"); }

%%
void main(){
   yylex();
   printf("%d",i);
}
int yyerror(){
   return 1;
}
int yywrap(){
   return 1;
}
```

Output:



2. Write a lex program to verify a given IMEI number for a mobile is valid or not.

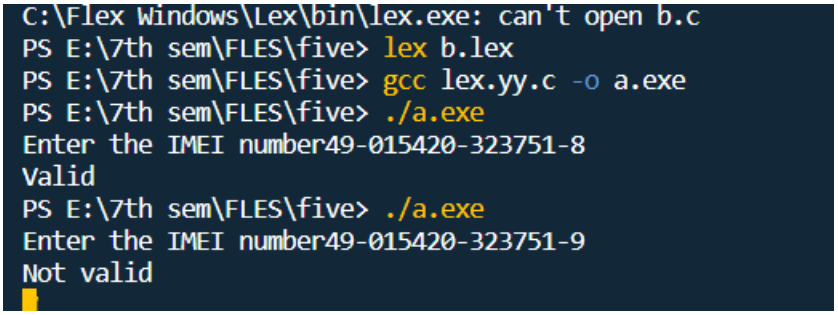
Code:

```
%{
   #include<stdio.h>
   #include<ctype.h>
void check(char*);
%}
pattern [0-9]{2}+[-]+(516604|292908|469904|015420)+[-]+[0-9]{6}[-][0-9]
%%
{pattern} check(yytext);
.* {printf("not valid");}
%%
int main(){
printf("Enter the IMEI number");
yylex();
}
void check(char* a)
{
int sum=0;
int i,x,j=0;
int len=17;
for(i=0;i<17;i++){
if (i==2|| i==9||i==16){
if (a[i]=='-')
continue;
}
else if (j%2==1){
x=(int)a[i]-(int)'0';
x*=2;
sum+=x%10;
x/=10;
sum+=x%10;
```

```
j++;
}
else{
sum+=(int)a[i]-(int)'0';
j++;

}
}
if( (((int)a[17]-(int)'0')+sum )%10==0){
   printf("Valid");
}
else{
   printf("Not valid");
}
}
int yyerror(){
return 1;
}
int yywrap(){
return 1;
}
```

Ouptut:



Result:

The programs have been executed successfully.