SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

Compiler Design Lab

(Computer Science and Engineering)

III B.Tech - II Semester								SRIT R20
Course Code	**Category**	**Hours/Week**			**Credits**	**Maximum Marks**		
		L	**T**	**P**	**C**	**CIA**	**SEE**	**Total**
R204GA05608	**PCC**	0	0	3	1.5	40	60	100

Objective:

- To develop android application using modern technologies.
- To implement the various components, layouts and views in creating android applications.
- Design the App with database connectivity using modern tools.

List of Experiments

1)Design a lexical analyzer for a given language and the lexical analyzer should ignore redundant spaces, tabs and new lines. It should also ignore comments. Although the syntax specification states that identifiers can be arbitrarily long, you may restrict the length to some reasonable value. Simulate the same in C language.
2)Write a C program to identify whether a given line is a comment or not.
3)Write a C program to recognize strings under 'a', 'a*b+', 'abb'.
4)Write a C program to test whether a given identifier is valid or not.
5)Write a C program to simulate lexical analyzer for validating operators.
6)Implement the lexical analyzer using JLex, flex or other lexical analyzer generating tools.
7) Write a C program for implementing the functionalities of predictive parser for the mini language specified in Note 1.
8) a) *Write a C program for constructing of LL (1) parsing.
b) *Write a C program for constructing recursive descent parsing.
9) Write a C program to implement LALR parsing.
10) a) Write a C program to implement operator precedence parsing.
b) Write a C program to implement Program semantic rules to calculate the expression that takes an expression with digits, + and * and computes the value

Note 1:

A simple language written in this language is

```
{int a[3],t1,t2;
T1=2;
A[0]=1;a[1]=2;a[t]=3;
T2=-( a[2]+t1*6)/(a[2]-t1);
If t2>5then
Print(t2)
Else{
Int t3;
T3=99;
T2=25;
Print(-t1+t2*t3);/*this is a comment on 2 lines*/
}endif
}
```

Comments(zero or more characters enclosed between the standard C/JAVA Style comment brackets/*…*/)can be inserted .The language has rudimentary support for1-dimenstional array,the declaration int a[3] declares an array of three elements,referenced as a[0],a[1] and a[2].Note also you should worry about the scooping of names.

Reference Books:

1. "Dawn Griffiths, David Griffiths" Head First Android Development: A Brain-Friendly Guide, O'Reilly Media.
2. "Dawn Griffiths, David Griffiths" Head First Kotlin: A Brain-Friendly Guide, O'Reilly Media

Course Outcomes:

At the end of the lab, student will be able to

1. To Create application data sharing with different concepts of sending and intercepting Messages.
2. Develop an application using services and publishing android applications.
3. To Illustrate the advancement in android app development.
4. To develop applications using IntelliJ and android studio.
5. Create an android app using java programming.
6. Create an android app using Kotlin programming.