Faculty of Engineering and Technology			
Ramaiah University of Applied Sciences			
Department	Computer Science and Engineering	Programme	B. Tech in Computer Science and Engineering
Semester/Batch	05th /2018		
Course Code	19CSC305A	Course Title	Compilers
Course Leader	Mr. Hari Krishna S. M. & Ms. Suvidha		

Assignment					
Register No.		**Name of the Student**			
Sections		**Marking Scheme**	**Marks**		
			Max Marks	**First Examiner Marks**	**Moderator**
Part A 1					
	A 1.1	Implementation in *Lex*	06		
	A 1.2	Results and Comments	04		
		Part-A 1 Max Marks	**10**		
	A 2.1	Implementation in *Lex*	10		
	A 2.2	Results and Comments	05		
		Part-A 2 Max Marks	**15**		
		Total Assignment Marks	**25**		

Course Marks Tabulation				
Component- CET B Assignment	**First Examiner**	**Remarks**	**Second Examiner**	**Remarks**
A.1				
A.2				
Marks (out of 25)				

Signature of First Examiner **Signature of Moderator**

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Please note:

1. Documental evidence for all the components/parts of the assessment such as the reports, photographs, laboratory exam / tool tests are required to be attached to the assignment report in a proper order.
2. The First Examiner is required to mark the comments in RED ink and the Second Examiner's comments should be in GREEN ink.
3. The marks for all the questions of the assignment have to be written only in the **Component – CET B: Assignment** table.
4. If the variation between the marks awarded by the first examiner and the second examiner lies within +/- 3 marks, then the marks allotted by the first examiner is considered to be final. If the variation is more than +/- 3 marks then both the examiners should resolve the issue in consultation with the Chairman BoE.

Assignment

Instructions to students:

1. The assignment consists of **1** questions: Part A – **2** Question.
2. Maximum marks is **25**.
3. The assignment has to be neatly word processed as per the prescribed format.
4. The maximum number of pages should be restricted to **25**.
5. The printed assignment must be submitted to the course leader.
6. **Submission Date: 28th November 2020**
7. **Submission after the due date is not permitted.**
8. **IMPORTANT**: It is essential that all the sources used in preparation of the assignment must be suitably referenced in the text.
9. Marks will be awarded only to the sections and subsections clearly indicated as per the problem statement/exercise/question

Preamble:

The aim of this course is to train the students in the design and implementation of compilers and various components of a compiler, including a scanner, parser, and code generator. The students are exposed to GNU compiler, construction tools and their application. Students are trained to design and implement a compiler for a simple language.

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PART – A **(25 Marks)**

1. **(10 Marks)**

Develop a lexical analyser for any given text, perform the following:

- Multiple consecutive blank lines should be compressed and calculate number of lines at the end of given text.
- Multiple consecutive spaces should be compressed and calculate number of blank space at the end of given text.
- Space before and after punctuation and after opening and closing parentheses.

Your report should include:

A1.1 Implementation of Lex

A1.2 Results and Comments

2. **(15 Marks)**

Develop a lexical analyser to recognise the given 'C' file (***input.c)*** and generate tokens respectively.

Kindly use the link below to download **input.c** file:

https://u.pcloud.link/publink/show?code=XZTTMHXZOsDE3JdtMXJaXMkNWX8K3ujPvYk0

Your report should include:

A2.1 Implementation of Lex

A2.2 Results and Comments