ASSIGNMENT: 2
SYSTEM SOFTWARE

1.	Describe the various parsing techniques (LL, LR, SLR, recursive descent) and their suitability for different types of grammars. Include examples of when to use each technique.
2.	Describe code optimization techniques and their impact on execution speed.
3.	What are the basic functionalities provided by an Assembler.
4.	What are nested macro calls? Provide an example.
5.	What are the basic tasks performed by a macro processor?
6.	Describe the design of a simple macro preprocessor. What functions does it perform?
7.	What is a compiler? Provide a brief definition.
8.	Name three types of compilers and give a brief description of each.
9.	Explain the differences between a compiler, interpreter, and assembler with examples. What are the advantages and disadvantages of each?
10.	Define and explain operator precedence parsing.
11.	Name three types of errors that can occur in Java programs.
12.	What is a dynamic debugger? How does it differ from a static debugger?
13.	Explain the concept of a parse tree and its role in parsing. Provide an example of how a parse tree is constructed from a given grammar.
14.	Briefly discuss backpatching.
15.	Explain the elements of Assembly code and types of statements.
16.	What are the types of Assembler? Explain.
17.	Define Forward reference and it can be solved.
18.	Write difference between Single pass and Two pass assembler.

19.	What are the different tables used in Two pass assembler.
20.	Discuss in detail the different types of errors that can occur in Java programs, including syntax errors, runtime errors, and logical errors. Provide examples of each and explain the best practices for identifying and resolving these errors in a development environment.