

# Compilers Project

Phase 2

# Project Roles

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## Phase\_2

- Our DSL is named as VGM as our focus is mainly on vectors, graphs and matrices
- It also has many other implementations like arrays, strings and more
- The goal of this phase is to conduct the lexical and syntax analysis of the language
- Lexical analysis is the early stage of compiler where the program is broken down to tokens
- We have written code for generating tokens in a file called “lexer.l”
- Regular expressions are defined for corresponding tokens
- We have written the regular expressions in the “lexer.l” file
- The corresponding tokens are printed in a file called “tokens.txt”

- Syntax analysis or Parsing is the next stage of the compiler
- A Context Free Grammar has to be written for the syntax definition
- CFG and the token types are written using yacc specification in the file called “parser.y”
- The output (similar to assignment 2) is printed to a file called “parsed.txt”
- The input (program to be checked for parsing) has to be placed in the file called “input.txt”
- The test cases for this second phase are written in the compilers\_project/testcases/phase2 directory

# Steps for Execution

- Go the directory `compilers_project/phase2`
- Run the following commands one after the other
- `yacc -d parser.y`
- `lex lexer.l`
- `gcc lex.yy.c y.tab.c -w`
- `./a.out`