

Lab Manuals  
Compiler Construction



Improving the parser of the compiler in C++ with help of STL

**Designed by**

Laeq Khan Niazi  
Lecturer Computer Science Department,  
University of Engineering and Technology, Lahore.

**Department of Computer Science  
University of Engineering and Technology, Lahore.**

In this lab manual we will write the code to write the parser for our language then you will be given a task to enhance the language features.

### **Your Lab Tasks**

1. Task1 Turn this code like passing the file name from cmd (Done in lab1) and take that code and pass accordingly.
2. Making your language errors more human friendly to display the line number of the error.
3. Add more data types like float, double, string, bool, char into your language,
4. Add more keywords into your language
5. Change the structure of conditions like you can turn if statement into Agar or any keyword of your choice.
6. Add the loop feature into your language (while or for)
7. Add logical expressions into your language inside if conditions like &&, ||, == and !=
8. **Introduce the symbol table in your code (If not done so far)** (Use best possible data structure that you can meet best performance) in your document also mention the reason of choosing the data structure.

### **Your Lab Tasks**

#### **Some Extra Things you can do**

1. Add feature to support comments
2. Try to show the expected correct code. Like if semicolon is missing show the possible correct code.
3. Add the function feature into your language (Extra marks for this implementation)