# Report

## Discussion on implement:

### C:

**Data structure:** Array

**Input handling:** Implemented with exception handling.

**Discussion:** I used arrays for storing orders, and char-array, integers for other user interaction options. I developed a good flow for our program, and implemented it as it was being made without classes so it wasn’t easy but I did it.

### Lisp:

**Data structure:** ClOSP

**Input handling:** well handled with exception handling.

**Discussion:** I used ClOSP for storing orders and objects, and string, integers for other user interaction options. I developed a good flow for our program, and implemented it I uses Lisp classes to make my code robust.

### Java:

**Data structure:** Java Array

**Input handling:** Implemented with exception handling.

**Discussion:** I used arrays for storing orders, custom objects, strings, integers for other basic operations. I developed a very good flow for our pizza-shop program, and implemented it. As Java is wordy but after development it is best from all.

### Python:

**Data structure:** Python List

**Input handling:** Implemented with exception handling.

**Discussion:** I used Python list for storing orders, and string, integers for other user interaction options. Python auto variable type assignment is so helpful, python TKinter is very good and easy to use for GUI operations. In python it was too easy to code this whole program.

## Language suitability report:

Every programming language has there’s own features, that makes good for a special type of program or bad. Here we are learning the experience with C, Lisp, Java and Python for a problem given in Assignment ITECH5403.

Problem is to make a program for pizza-pasta shop, where user can make order, and automatically discount for quantitative orders, and checkout page for order, finally ready for next order. User also want to track current day orders.

### C:

As we know C is the mother language of all high-level languages, but it does not have classes and objects, which makes it hard to program for a complex structure, C is bit wordy (syntactically) than python. But other than these, C is good for small program, it’s fast. But during this project I faced a lot problem with variable type assignment and making structure and flow of whole program.

**Conclusion:** overall C is okay for this problem but not for as future scope for extension of same project.

### lisp:

As we know Lisp is second oldest programming language. It is machine-dependant so it can make a program to work in a system and not work in another, but it also makes efficient as code. Lisp is less wordy than C. During this project I uses global Lisp array, and CLOS which makes it great. CLOS is a powerful dynamic object system which differs radically form the OOP facilities found in more static language such as C++ or java. Overall Lisp is beautiful, elegant language.

**Conclusion:** overall lisp is well suited for this problem as future extensive scope.

### Java:

Java is damn good for this problem, it’s variable scopes and wrapper classes makes data secure, and java is object oriented which makes easy to program complex type problem like this one. In this we created only 4 classes named order customer, order, pizza, pasta and one main function. By helping of these classes, and objects I designed a program which is very good and efficient and also extensive for future scope.

Only problem Java ever had is code-length, programmer gets very frustrated for typing code and syntax.

**Conclusion:** if we ignore, code-length problem, Overall java will be the best language for this problem.

### Python:

Python is best known for his prettiness, and simplicity with amazing feature, but which also makes it slowest language. Python is very good for complex type problem. And user interaction in python is very good and easy to use, python auto var type assignment makes programmer easy to write a code.

**Conclusion:** python is also best after java, but if we can ignore the speed of program.

## Summary:

After all conclusion, I will choose language according my requirements, if no future extension, choose C. if no problem with execution time choose Python, Lisp. If no problem with system portability and speed choose Lisp. And if you have no problem with developing time of program then surely go for JAVA.