

# 4115 PLT Project Proposal -- PartialC

## Group Members:

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## 1. Introduction:

In this project, a new language is designed and implemented. This new language is a simplified version of C language that supports primitive types, pre-defined data types, operators and control flow.

The compiler for the language is written in Ocaml and then compiled to LLVM.

Indentation has no effect on syntax and white spaces are omitted. A new line is used to indicate a new statement.

## 2. Language Manual

Data Types	Description
int	integer
float	real number
bool	boolean
char	character
string	string
[]	array

Operators	Description
+, -, *, /	basic arithmetic operators
==, <=, >=	comparison
&&,	logical operators
//	single-line comment

Control Flow	Description
if, else	condition
for, while	loop

return	return statement
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Others	Description
size()	Built in function that return size of array
void	key work that used as void return type

### 3. Sample Code:

```
//Sample code for two sum problem

main() { //main program starts
    twoSum([2,5,63,9,17], 14)
}

void twoSum (int[] arr, int target) {
    int i
    int j
    for(i=0; i<arr.size(); i++) {
        for(j=i+1; j< arr.size(); j++) {
            total = nums[i]+nums[j]
            if(total == target) {
                print(nums[i], nums[j])
            }
        }
    }
}
```