## Specification of a subset of the C programming language.

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Abstract

## 1 Introduction

This is document will become reference document to whatever the language will become.

## 2 Semantics draft

• The result of an assignment is not an lvalue.

$$[]$$
 (i=12) = 11;

The above instance is illegal.

• The result of an increment or decrement is not an lvalue.

[] int 
$$i = 0$$
;  $++i = 12$ ;

The above example is illegal.

• The result of a tenary operation is not an lvalue.

```
[] int i = 0; 0 ? 1 : i = 12;
```

The above example is illegal.

- The language does not support bit-fields. In C, bit-fields can be used to specify the width that exceeds the width of the underlying type of the declaration.
- The language will not allow type definitions to appear anywhere that a type should be specified. For example, the below statement is valid C but should be illegal in this language.

```
[] void func(struct S{int x;} s);
```

- Like C, the language allows pointers to void to implicitly cast to any other pointer types.
- char literals will be of type char.
- The grammar for initialization should not allow for an empty initializer list. For instance, int i = {}; is illegal.

• The scope of the variable declared in the init-statement of the for loop is same as any used within the loop. Thus this block will be illegal, it is very much legal in C.