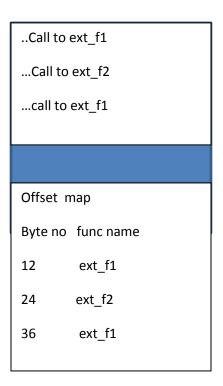Linking External Functions

Compiler generates a byte offset map of the calls to external functions. This mapping is at the end of the .m file which the linker can use. The programmer provides a meld definition file
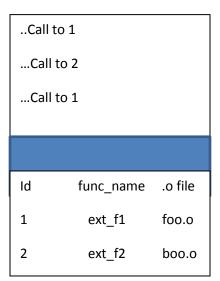
.m file structure

| ..Call to ext_f1 |
| ...Call to ext_f2 |
| ...call to ext_f1 |

Offset map

| Byte no | func name |
|---------|-----------|
| 12 | ext_f1 |
| 24 | ext_f2 |
| 36 | ext_f1 |

programmer defined .md file structure

| Func_name | signature | .o file |
|-----------|-----------|---------|
| ext_f1 | int(int,int) | foo.o |
| ext_f2 | int(int,int) | boo.o |

Using the .m and .md file, the linker generates a modified .ml file which contains the map to the external function

| ..Call to 1 |
| ...Call to 2 |
| ...Call to 1 |

| Id | func_name | .o file |
|----|-----------|---------|
| 1 | ext_f1 | foo.o |
| 2 | ext_f2 | boo.o |

The VM can dynamically load the .o file and make function calls using dlopen and dlsym respectively.