MileStone-4

Compiling and Execution Instructions:

In the file, there are 2 folders milestone3, milestone4.
In the milestone3/src folder, we have lexer,parser and 3ac generator and in milestone3/test folder, we have 8 testcases for java. The generated 3ac codes for these testcases are served as testcases for milestone4.
For 3ac code generation, open terminal in milestone3 directory and use the following commands:

- make
- bin/3acgen test/test1.java

After running these commands, test.3ac file will be generated on the milestone3 directory, which contains the 3ac for the testcase used.

Now, in the milestone4/src folder, we have codegen files and translate files for 3ac to x86 and in milestone4/test folder, we have 8 testcases(3ac codes).
For assembly code, open terminal in milestone4 directory and use the following commands:

- make
- bin/codegen test/test1.3ac

Output:

The generated assembly code is displayed on the terminal itself.

Basic Features:

We have included the following features:

- Primitive data types (int, long, float, double, boolean).
- All the basic operators (arithmetic, increment/decrement, relational, .. etc).
- Support for array (only in C-style declarations).
- Loops (if-else, for, while).
- Recursion.
- Support for classes, objects.
- Support for println function.
- Method and Method calls.

Optional Features:

We have also added some of the optional features.

- Support for Strings.
- Support for Interfaces.

References:

We have referred "rohitgpt17/(GoLang to MIPS)" for 3ac to x86 code generator (just used the basic outline).

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