

Compiler Assignment 1

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Ant

The ant build file is located at `src/yap1/test/backend/sm/build-dist.xml`.

Targets

Ant target	Description	Parameters to overwrite	Notes
<code>init</code>	creates the directory		
<code>compile-java</code>	compile the sources		
<code>run-backend</code>	generate MJ bytecode	<code>testname</code> (which java file to run) <code>outfile</code> (where to write the bytecode)	
<code>run-mj</code>	run MJ code with mjvm	<code>outfile</code> (which bytecode file to run)	depends <code>run-backend</code>
<code>eval</code>	run a single test file (generate mj and run)	<code>testname</code> (which java file to run) <code>runtimeoutput</code> (where to write the output)	
<code>eval-all</code>	run all tests		depends <code>eval</code>
<code>clean</code>	remove generated files		
<code>decode</code>	decode generated MJ file	<code>outfile</code> (which bytecode file to decode)	prints output
<code>coverage</code>	run coverage for a single file	<code>testname</code> (which java file to run)	uses JaCoCo
<code>coverage-all</code>	run coverage for all tests		depends <code>coverage</code>
<code>cov-report</code>	create full coverage report		depends <code>coverage-all</code>

Notes:

`testname` just requires the name of the test class under `yap1.test.backend.sm`.

`testname` automatically updates `mainclass`, `outfile`, `runtimeoutput`, `truefile`, and `coveragefile`.

Project Files

With the exception of tests, all new code is in package `yap1.impl`.

- `BackendMJ` implements `BackendBinSM`
- `ByteUtils` helper methods for byte manipulation
- `Instruction` enum of MJ opcodes with byte values
- `OperandType` enum of explicit MJ operand types (s8, s16, s32)
- `Procedure` represents a defined procedure. keeps track of allocated local variables

Tests are located in package `yap1.test.backend.sm`.

Coverage

Coverage was calculated with the Java Code Coverage (JaCoCo) plugin. The library is located at `lib/jacocoant.jar`.

The coverage report for `yap1.impl` is generated over all tests. See ant target `cov-report`.

Reported coverage for `yap1.impl`: 100.0%