

## How to use the benchmarking tool

To use the benchmarking tool, you first have to add the source files to *your\_project\_directory/src/bench* and add the sub directory to the CMake list:

```
include_directories(${CMAKE_SOURCE_DIR}/src/bench/)
link_directories(${CMAKE_SOURCE_DIR}/src/bench/)
```

To run the tool, the path to the bench file should be passed as argument to the binary.

The benchmarking tool receives a logical function described in the bench format and generates an ROBDD for the function using the provided Manager class. It will provide graphical (dot format) and text representation of the generated ROBDD along with some information about the runtime and memory usage of the ROBDD generation procedure.

After running the tool, performance of your implementation is reported as follows:

**Runtime:** The amount of time spent executing the user code. It should be noted that this is different from the wall time, as the time spent executing system functions or other OS activities is not considered.

**VM:** The virtual memory size consumed by the program.

**RSS:** The portion of memory occupied by the process that is held in the main memory (RAM).

The resulted ROBDD will be stored in subfolder, named “*results-\$benchFileName\$*”, in the same directory.

## How to verify the result

To verify your result, a simple program is given to check the equivalence between your generated ROBDD and the correct graph generated by our implementation. You first have to add the source files to *your\_project\_directory/src/verify* and add the sub directory to the CMake list:

```
include_directories(${CMAKE_SOURCE_DIR}/src/verify/)
link_directories(${CMAKE_SOURCE_DIR}/src/verify/)
```

The program receives two ROBDD (in Text representation) and checks the graph isomorphism between them. The text representation of the ROBDD can be found after running the benchmarking tool in the the following path:

```
results-$benchFileName$/txt/$outputName$.txt
```