Installing Z3 Theorem Prover on MacOS

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Z3 Theorem Prover is one of the most-used satisfiability modulo theories (SMT) solver by Microsoft and can be found in Github

Z3Prover/z3

Z3 is a theorem prover from Microsoft Research. It is licensed under the MIT license. If you are not

github.com

Z3 theorem can be used via online through the rise4fun site.

Z3 @ rise4fun from Microsoft

Z3 is a high-performance theorem prover. Z3 supports arithmetic, fixed-size bit-vectors, extensional arrays, datatypes...

rise4fun.com

For simple projects and codes, working through the site might be enough, but when working on large projects or when offline uses are needed, building and installing on a computer might be

necessary.

When trying to build/install, the README file provided might be confusing (it did for me). And for those people, here is a simplified version on how to build and install the Z3 theorem prover on MacOS.

In this article, Z3 prover is built/installed in such a way that C, C++, Python APIs are provided.

1. Build using make and GCC/Clang

```
git clone https://github.com/Z3Prover/z3.git
cd z3

python3 scripts/mk_make.py --python
cd build
make
sudo make install
```

2. Install the Python wrapper

```
pip3 install z3-solver
```

3. Check if installed correctly

To check whether or not everything went smoothly, execute an example python code provided in the examples/python directory

examples.py provided in the repository

```
python3 examples/python/example.py
```

After checking there are no errors on executing the example.py (and there shouldn't be any), it's good to go and you can start using the Z3 Theorem Prover!

(Any comments or constructive criticisms are always welcome!)

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