1 DDMon

DDMon is a deadlock monitoring tool for Erlang and Elixir programs based on the `gen_server` behaviour.

This document contains prerequisites and instructions for building DDMon.

NOTE: To evaluate the OOPSLA'25 artifact, you can use a Docker-based setup for DDMon. In this case, you can simply follow the instructions in OVERVIEW.md and skip the rest of this file.

NOTE: The following build instructions are tested on GNU/Linux (Ubuntu 24.04 and 25.04, and Fedora 42) and macOS.

1.1 Build prerequisites

- Erlang/OTP, version `26` or higher
- Elixir, version `1.14` or higher
- Mix
- Python 3 with numpy (at least 2.2), pandas (at least 2.2) and matplotlib (at least 3.10) — for plotting benchmark results

1.1.1 Optional: script for a fresh local installation of Erlang and Elixir

If you do not have Erlang or Elixir installed, we provide a script that automatically downloads and installs the correct versions. Make sure you have the following build dependencies installed on your system:

- `autoconf`
- `make`
- `libssl-dev`
- `openssl`
- `ncurses`
- `wxWidgets`

To automatically obtain the right versions of Erlang and Elixir, **source** (not run!) the provided script in `bash`:

```
source install-otp.sh
```

This will use asdf version manager to install Erlang and Elixir. If you do not have `asdf` on your system, it shall be installed in the currently visited directory. You may need to run this script in every shell session in order to set up `PATH` correctly.

1.2 Building DDMon

To create a local build of DDMon, run:

```
make
```

If you do not have `make`, you can run the following instead:

```
mix deps.get
mix escript.build
```

1.3 Evaluating the OOPSLA'25 artifact

After building DDMon, you can follow the instructions referenced from OVERVIEW.md — except that, to use your local build of DDMon, you should **remove the Docker-related part of each command**. For example, if the instructions ask you to run:

```
docker run --rm -v "$(pwd)/output:/app/output" ddmon ./bench.sh small
```

then you should run instead:

```
./bench.sh small
```