# tb\_cocotb.py **AUTHORS** JAY CONVERTINO **DATES** 2025/01/27 **INFORMATION Brief** Cocotb test bench License MIT Copyright 2025 Jay Convertino Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A

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# **FUNCTIONS**

## random\_bool

def random\_bool()

Return a infinte cycle of random bools

SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Returns: List

## start\_clock

```
def start_clock(
dut
)
```

Start the simulation clock generator.

## **Parameters**

dut Device under test passed from cocotb test function

## reset\_dut

```
async def reset_dut(
dut
)
```

Cocotb coroutine for resets, used with await to make sure system is reset.

#### **Parameters**

dut Device under test passed from cocotb.

## count\_pulses

```
async def count_pulses(
dut
)
```

Cocotb task to count pulses from a output.

## speed\_test

```
@cocotb.test()
async def speed_test(
dut
)
```

Test various speeds of the output enable

#### **Parameters**

dut Device under test passed from cocotb.

## in\_reset

```
@cocotb.test()
async def in_reset(
dut
)
```

Coroutine that is identified as a test routine. This routine tests if device stays in unready state when in reset.

#### **Parameters**

dut Device under test passed from cocotb.

# no\_clock

```
@cocotb.test()
async def no_clock(
dut
)
```

Coroutine that is identified as a test routine. This routine tests if no ready when clock is lost and device is left in reset.

## **Parameters**

dut Device under test passed from cocotb.