

# tb\_cocotb.py

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## AUTHORS

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## DATES

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## INFORMATION

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### Brief

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Cocotb test bench

### License MIT

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## FUNCTIONS

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### random\_bool

---

```
def random_bool()
```

Return a infinte cycle of random bools

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.

## single\_word\_00

---

```
@cocotb.test()  
async def single_word_00(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests for writing a single word, and then reading a single word for cpol == 0 and cpha == 0.

### Parameters

**dut**     Device under test passed from cocotb.

## single\_word\_10

---

```
@cocotb.test()  
async def single_word_10(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests for writing a single word, and then reading a single word for cpol == 1 and cpha == 0.

### Parameters

**dut**     Device under test passed from cocotb.

## single\_word\_01

---

```
@cocotb.test()  
async def single_word_01(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests for writing a single word, and then reading a

single word for cpol == 0 and cpha == 1.

#### Parameters

**dut** Device under test passed from cocotb.

### single\_word\_11

---

```
@cocotb.test()
async def single_word_11(
    dut
)
```

Coroutine that is identified as a test routine. This routine tests for writing a single word, and then reading a single word for cpol == 1 and cpha == 1.

#### 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.