

# COMP6991 23T1

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Concurrency

# Concurrency refresher

# Concurrency going wrong

**Example: `data_race.c`**

**Example: `DataRace.java`**

**Example: `data_race.py`**

# How can we fix it?

**Example:** `fix_race.c`

**Example:** `FixRace.java`

# Causing a data race in Rust

**Example: attempt 1-3**

# Solving the issue in Rust

**Example: attempt 4**

# Solving lifetime issues

**Example: attempt 4 fix 1-2**

# Another approach?

**Example: attempt 5**



# Evil crime time

**Example: `unsafe_race`**

**Tuesday**  
**todo!("list");**

- > **thread::spawn bounds**
- > **Scoped threads**
- > **Atomics**
- > **`move` closures**
- > **Poisoning**
- > **RwLock, briefly**
- > **Channels**
- > **Send / Sync**
- > **Rayon**