

Modelling with TLA⁺

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1 TLA⁺ Models with Proofs

We give a list of examples of PlusCal algorithms translated with the functionality and proven partially correct using the TLAPM tool. The algorithms are developed by refinement from a contract in the Rodin tool; the algorithm is derived from an Event-B model equipped with its invariant, which is used for verification with TLA⁺ and PllusCal. The archives can be found at this link.

1.1 Computing the sum of elements of a vector.

TLA Module for the algorithm computing the sum of elements of a vector.

- Module TLA for the algorithm computing the sum of elements of a vector in pdf

1.2 Incrementing a positive value

TLA Module for the algorithm *incrementing a positive value*.

- Module TLA for the algorithm *incrementing a positive value* in pdf

1.3 Maximum of two integer values

TLA Module for the algorithm *maximum of two integer values*

- Module TLA for the algorithm *maximum of two integer values* in pdf