Dependable Distributed Systems

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A distributed system is a set of entities, computes or machines communicating, coordinating and sharing resources to reach a common goal, appearing as a single computing system.

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A **failure detector abstraction** is a software module used to detect faulty processes, it encapsulate timing assumptions of a either partially synchronous or fully synchronous system. It has two properties:

- **Accuracy**: that represents the ability to avoid mistakes
- **Completeness**: that represents the ability to detect all failures

5.1 Perfect Failure Detectors

Here is a figure that illustrates the specifications of perfect failure detectors:

5.2 Eventually Perfect Failure Detectors

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Notice: The exercises are from 2022-2023 academic year.

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