Design and Implementation of a Java-based BDD library supporting parallel processing (Bachelor Thesis/ Master Thesis / Hiwi Student Position)

Motivation

In the research of game-based synthesis, the efficiency of a BDD package strongly decides the speed. In this thesis (hiwi student position), the student (under the supervision) is expected to experience the front-tier of research by designing and implementing a parallel-BDD package and apply it to our novel synthesis tools (e.g., MGSyn, VissBIP, GAVS+).

Work Package

- Understand the theory of Binary Decision Diagrams (BDD).
- Understand how parallel programming is achieved in Java.
- Understand underlying techniques for selected papers.
- Implementation (with defined interface), and release it as an open-source project.
- (Optional) Submit a short paper or a poster to tier-1 conferences in verification.

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