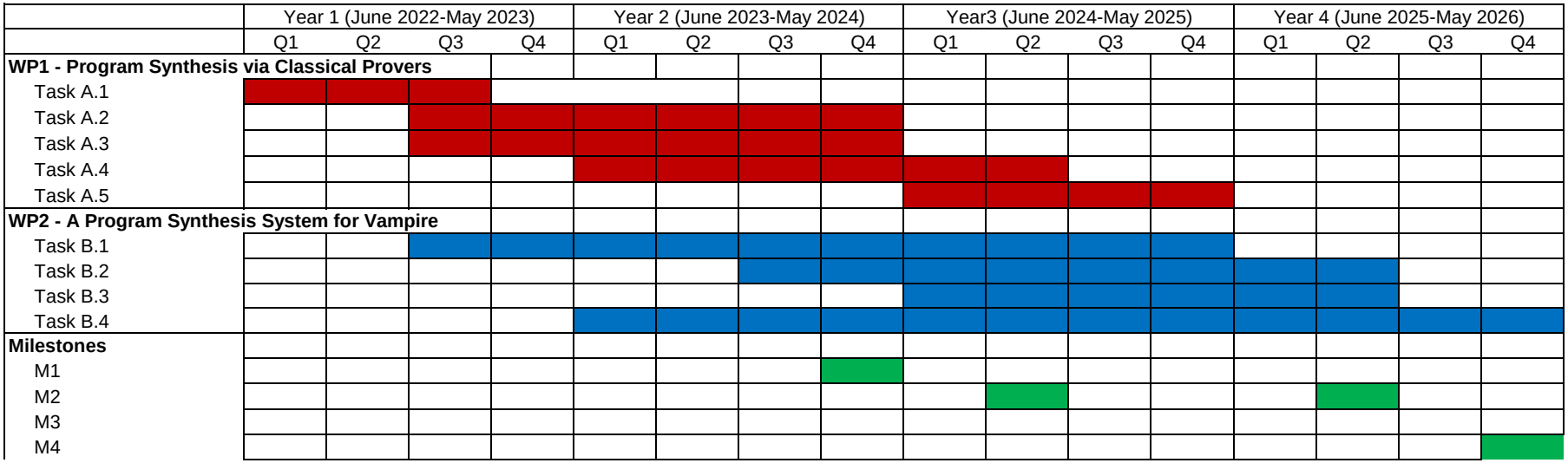
PROJECT FLOWCHART



Short description of Tasks

Task A.1: Designing a calculus with control structures suitable for program extraction from Vampire proofs
Task A.2: Establishing under what conditions non-constructive applications of control structures can be eliminated
Task A.3: Collecting characterizations of specifications for which constructiveness of the extracted program can be guaranteed
Task A.4: Examining transformation procedures for input specifications
Task A.5: Evaluating the applicability, robustness and potential shortcomings of the developed mechanisms
Task B.1: Implementing the findings of WP1 into a software system
Task B.2: Utilizing syntactic context for improved proof effectiveness
Task B.3: Extending the system to restricted specifications, e.g. input/output pairs
Task B.4: Extensive testing and benchmarking

Ressources

- Work done mainly by Team A
- Work done mainly by Team B
- Work done mainly by Team C
- Work done mainly by Team D

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Team B: Florian Zuleger, Moritz Sinn
Team C: Florian Zuleger, N.N (PhD student)
Team D: Florian Zuleger, N.N (PhD student)

Milestones:

M1: Extraction of constructive programs from classical proofs
M2: Classical provers for program synthesis via modified specifications
M3: Fully working implementation of theoretical findings
M4: A usable system for program synthesis built on top of the Vampire theorem prover