

Example Topics for Alloy Project

Project Topic

- Feel free to propose any topic you are interested in, but I would recommend a subject related to societal/local problems that has some relevance to practice.
- I have included a few examples as suggestions.

Sample Subjects

- Flight scheduling
 - Static: Flights, pilots, airports, aircrafts, passengers
 - Dynamic: find schedules for specific source-destination pairs
- Organizational structure
 - Static: Schools, companies, governmental, NGOs
 - Dynamic: structural change, hiring/firing, dissolving a dept.
- Class scheduling
 - Static: classes, classrooms, instructors, proposed time intervals
 - Dynamic: find the schedule of a semester

Sample Subjects - Continued

- A database of multi-media files
- A system of government, its branches and political parties
- A social network (e.g., professional network)
- A business model of a company with all its internal structure and its external relations with other companies scheduling (e.g., sport events, school classes, inbound/outbound flights of an airport, etc.)
- A system of information security policies in terms of access control a healthcare system with all stockholders and their relations

Sample Subjects

- Model a computing system
 - HW:
 - ALU or a component thereof
 - Cache Memory
 - ...
 - SW:
 - Cache coherence protocol
 - Network protocols
 - CPU scheduler
 - ...
 - Cyber Physical Systems
 - Medical devices
 - CAN bus in cars