Written Proposals (1st to 6th weeks)

Each team of up to 3 students should submit a written project proposal, one to five pages long. The proposals should include enough detail to convince a reader that you have a good problem, you understand how hard it is, you have a plan for how to solve it, and you have an idea about experiments you might run to test the success of your Java Android app. Please do not be vague in your written descriptions. An example of a brief outline you might use is as follows:

- Goal
  - What are we going to do?
- Previous Work
  - What related work has been done?
- Approach
  - What approach are we going to try?
  - Why do we think it will work well?
- Methodology
  - Front-end part
  - Back-end part
  - What steps (task list) are required?
  - Which of these steps is particularly hard?
  - What to do if the hard steps don't work out?
- Testing Java Android App
  - How will we know when we are done?
  - How will we know whether we have succeeded?
- Summary
  - What will we learn by doing this project?
- References
- Appendices

A course instructor will go over the project proposal of each team and advise the team about their best plan of the solution.

A case-oriented example of the outline is as follows:

- Project Description
- Problem statement
  - Designing a team (team lead, front-end and back-end developers)
  - Data organization
  - Data retrieval
  - Development model
- Related Work
- Procedures and Methods
  - Development platform
  - Development IDE
  - Programming language
  - Hierarchy of classes
  - Expected challenges
  - Testing and evaluation
- Ethical, Professional and Legal Issues
- Anticipated Outcomes
  - System
  - Expected impact
  - File I/O in Java Android app
  - CameraX vs Camera2 APIs

    - Key success factors
- Project Plan
    - Risks
        - Hardware failures and low-performance Android devices
        - Conflict between group members
        - Group members leaving
        - Failure to obtain permission photos of other photographers
    - Resources required
    - Gantt chart
    - Milestones
    - Work allocation
- Conclusion
- References