Here are the tasks for the first development phase.

*** Basic features
Functions to create a new database; create users. All features (above and below) should be usable through a web interface. The web service should require to log in.

* Events
A user can create an event, with a starting and an ending date, and may invite people to an event. Invited people may accept or decline the invitation.

* Agenda
Each user can display its agenda, made of all its events and the ones he was invited to.

* Notifications
The interface should feature notifications reminding users of nearing events. Reminders should be configurable: enabled/disabled, delay.

* ICS export
Calendars must be accessible as ICS, with authentication.

* Accounting
The organizer can link an accounting to an event, which allows to register all the money transactions made for the event, i.e. who paid what for the event. The cost of the event is split evenly for all participants.

* Balance
It should be possible to compute the current balances of an event accounting.

** Resolution
The tool should propose solutions to balance the account: optimizing either the total number of transactions, or the maximum number of transaction per user.

* Relationships
A user can declare publicly that he is friend with somebody. More specifically, relationship can be secretly rated, from $-10$ to $10$.

** Sitting arrangement
For an event, the organizer can provide a number of tables with their respective capacities. The application should propose a sitting arrangement for all the invitees, based on the secret relationship ratings, and a notion of optimality that should be specified clearly. The organizer may provide its own relationship rating between people if he wishes.

** Optimal Meetings
Based on a set of constraints and the agendas of the people invited, set up multiple meetings at once. Constraints include minimum/maximum delays between events, duration of events, and possible time ranges of an event. For instance, knowing that Paul and Anna wish to meet three times over the next four weeks, during afternoons, with four to ten days between meetings; that Paul and Marc wish to meet between 5 pm and 7 pm on Tuesday or Friday; that Marc and Anna wish to meet in the morning any day but the week-end; given their respective agendas, provide suitable time slots that the suits all the constraints.
Project Description

The software should allow to organize events between friends, with many features to help the organizers. It should help to find dates suitable for everybody, provide a way to keep tracks of the money spent for the events and the reimbursements, and give an easy way to set up the sitting arrangement.

Skills

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(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]