THE UNIVERSITY OF BRITISH COLUMBIA

EECE 443 : Software Project Management

March 2014

Assignment #5: Prioritization

The IcFIN project we described in assignment 2 is now estimated at 140 person-days. This estimate has 2 components: 40 person-days in product definition, marketing, and project management overhead, and 100 person-days in software development (design, coding, testing).

But the venture capital company would like to know what reduced product could be put to market with a lesser budget.

You will use Karl Wiegers spreadsheet to come up with proposals of what can be accomplished with only 80 and 70 days of software development effort.

The attached table gives the result of the costing round, as well as some indication of the *perceived* value by potential users of the various features. You will have however to use your best judgment as to what benefit, penalty, cost and risk will be.

Note that our original use cases #1, 4, 13, 15, and 17 have been split in 2, with an optional part b, that can be built on top of the first part a. Note also that use case 14 depends on use case 13 being built. There may be other dependencies….

Produce "Feature lists" for an 80 person-days (or less) development and for a 70 person-days (or less) in the form of a table, or two. List your assumptions. Make sure your product is complete and coherent (i.e., no feature depending on something no implemented).

Submit you assignment in PDF via Connect by Wednesday, March 5th at 2:00pm *and* place a printed copy in the mailbox located in McLeod 4th floor, between rooms MCLD422 and 426. This is an individual assignment.

#	*Actor*	*Name*	*Description*	*UV*	*Effort*
UC1	Partner	Display current asset and history of contribution	For a partner, display current ownership, and history of contributions with level of ownership over time	1	4 (ownership) +3 (history)
UC2	Partner	Display current ownership	Show on a table the list of partners, and their current level (%) of ownership	1	5
UC3	Partner	Display current portfolio	Show the current composition of the portfolio, including the cash component	1	5
UC4	Partner	Display net unit value history	Show with table and graph the evolution of the investment club net unit value	1	3 (table) +5 (graph)
UC5	Treasurer	Enter partner contributions	How much cash are the partners contributing in the current cycle (period)	2	3
UC6	Treasurer	Close cycle	Recompute the value of the unit, based on contribu-tions, withdrawals, portfolio value, and revenues	1	8
UC7	Treasurer	Admit new partner	Add a new partner on the roster	2	2
UC8	Treasurer	Remove a departing partner	Liquidate the share of a partner	3	3
UC9	Treasurer	Enter income and expenses	Based on monthly brokerage statement, enter interests, capital gains, dividends, and financial charges	2	3
UC10	Trader	Enter trades	Add and remove entries in the portfolio of securities as decided by the club	2	4
UC11	Trader	Enter securities value	Manually enter securities value (and exchange rates)	2	2
UC12	System	Compute portfolio valuation	Everyday, the system computes automatically the value of the securities part of the portfolio, using online services	2	9
UC13	Treasurer	Produce taxation data	For a fiscal year, generate data to fulfill personal tax filing, such as T5 slips in Canada	2	12 (data) +2 (slip)
UC14	Partner	Access taxation data	After UC13, individuals can access their own data for tax filing purposes	2	+1
UC15	Admin	Install and set up	Create the server and the database	3	5 (manually) + 4 (script)
UC16	Admin	Maintain user and role	Create, maintain, delete: user login, password, and assign roles	3	6
UC17	All	Login/logout/time-out	Abstract use case that wraps all others	3	4 (login/out) + 1 (time out)
UC18	Admin	Backup	Backup and restore all data	3	3
UC19	Admin	Configure	Personalize the site (name, logo etc)	2	4

IseeFin
An Investment Club (IC) Financial Management tool

We envisage building and launching in the market a software tool to support *Investment Clubs*. An investment club is a group of persons who pool their financial resources (i.e., cash) in order to acquire and manage collectively a portfolio of securities (such as stocks, or bonds, or other publicly traded financial instruments)..

Features

The feature of the tool (codename: IseeFin) that you plan to market are:

- Variables contribution, based on the concept of IC "unit", similar to that of a mutual fund
- Members can join and leave at any time
- Members use the tool over the internet: club holding and members' valuation published on web, but restricted to members
- Automated valuation of portfolio
- Support for tax reporting, adjustable by country (e.g., T5 form in Canada, Form 1065 in the USA) as usually clubs are limited partnerships, hence "flow through" entities from a tax perspective
- Extensible and configurable
- Multiple currency USD & CAD, or GBP & EUR…

Market data

There are 4,700 active IC in the USA and 390 in Canada. Estimates are harder to derive for Europe due to market fragmentation: probably only about 1,200. The concept is starting to develop in Asia, China in particular. No data is available for other parts of the world.

One program sold by the US federation of IC, for $270 (US). Antiquated U.I. (DOS like), rigid set up, very hard to use. Sold to 20-25% of the clubs. No easy support for tax reporting; US-specific. No multiple currencies. No concept of "unit".
A small US tool is $119, but has too limited functionality: investmentclubaccounting.com
Another one is $119.99 per member.
Other clubs do it "manually" (from a paper register to some flat files: Excel etc.). A few big ones use a professional accountant and its software.
In the UK, ShareScope costs £79.95 per member plus £14 per month subscription.

Features

- Variables contribution, based on the concept of IC "unit"
- Members can join and leave at any time
- Valuation of portfolio automated
- Support for tax reporting, US and Canada (e.g., T5)

- Club holding and members' valuation published on web
- Extensible and configurable

Proof-of-concept Prototype

There exist already a proof-of-c0ncept prototype. It is a combination of
- Microsoft Excel Workbook (multiple sheets)
- Half a dozen Visual Basic Macro

And was used on a real club with 11 members for 3 years.

Overall requirements

Based on this prototype, and from analysis of other existing tools an initial use-case model was created, involving
Appendix A list the use cases, and appendix B the

Other Requirements or architectural considerations

- security (authentication, encryption of data, timeout on sessions, traces)
- multi-language, multi-language with Asian languages
- thin/think client on web
- choice of database
- choice of web server
- accuracy of results (implement invariant checking)
- valuation of the portfolio from some other web service
- downloading portfolio value from the bank (use Quicken format)
- ease of installation by non software gurus
- portability (to various type of ISP server...)
- backup of data and recovery, duplication of database

IseeFIN Database

There are 5 main tables of data in IseeFin's database:

1. **Users**: login name and password + roles + history of access
2. **Partners**: name, address, taxpayer ID number (e.g., SIN or SSN), date of entry
3. **Contributions**: For each partner: List of contributions/withdrawal (with dates); ownership level at each cycle end.
4. **Portfolio**: composition in terms of securities, ticker, amount, currency, etc.
5. **Activities**: income, expenses, trades, deposits, withdrawal (in each currency)