Software Development – From Code to Product

Semester A, 5775 (Oct 2014 to Jan 2015).
Lecturer: Dr Gideon Greenspan.

Objective

Learn how to turn a core technology or idea into a software product which delights users, succeeds in the marketplace and becomes a profitable business. We will study many examples of product and company successes and failures along the way.

Structure

2 hours lecture per week (attendance required). Practical exercises and a final project.

Syllabus

The following subjects will be covered:

- Introduction to software products
- The software entrepreneurship process
- User interface principles
- Practical user interface design
- Selling products and services
- Digital advertising
- Marketing for startups
- User retention strategies
- Customer facing APIs
- Analytics and optimization
- Search engine visibility

Prerequisites

Students must have passed the course: Introduction to Computer Science (111115)

Requirements

Attendance at lectures, submission of two practical exercises, final project and interview.

Grading

25% – Practical exercises (2 x 12.5%).
75% – Final project, subject to interview.

A final grade of 60% is required to pass the course.

Practical Exercises

Two exercises to practice the principles taught in the course. Example subjects:

- Specification for version 1.0 of a new product, with justifications.
- Documentation for a simple customer facing API.

Students should expect to spend about 5 hours on each exercise, individually or in pairs.

Final Project

A report analyzing and comparing two competing products in terms of: (a) functionality, (b) user interface, (c) business model and (d) marketing. The two products can be desktop software, web applications, mobile applications or any combination thereof. The choice of products is subject to approval by the lecturer. Students may work individually or in pairs.

Each student should expect to spend at least 25 hours preparing the report, and significantly more if working individually. Reports may be written in English or Hebrew, and must be submitted by February 12th. During March each student will be interviewed for approximately 15 minutes to discuss their report. The interview is for verification purposes and not graded. However students who cannot demonstrate in the interview that they made a significant contribution to their project will have their grade reduced accordingly

Bibliography

Some recommended background reading (not required):

- Fried J. *Getting Real*
- Livingston, J. *Founders at Work*
- Ries E. *The Lean Startup*

About the Lecturer

Dr Gideon Greenspan is a seasoned developer–entrepreneur who started his first software business at the age of 17. He has since founded and developed many successful websites, including Web Sudoku, the web's most popular sudoku site, and Copyscape, a plagiarism search engine serving millions of users. Since March 2014, he is the Founder and CEO of Coin Sciences Ltd, a startup developing a set of open protocols on top of the bitcoin network. Gideon has a BA in Computer Science and Business (Cambridge), an MA in Philosophy (London) and a PhD in Computer Science (Technion).

Office Hours

Immediately following the weekly lecture, subject to coordination in advance.