<u>Analysis of Answers</u> for the

Entrance Questionnaire for the course

"Software development for start-up entrepreneurs"

at WHU, Vallendar, March/April 2014

http://softlang.wikidot.com/course:startup14

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Summary of participation

- 26 completed questionnaires were collected.
- 20 of them indicated little to no background[1] in software development.
- Of the remaining 6, 3 showed significant background.
- Overall, the concepts of part I/III are hardly known.
- Also and not suprisingly, software development skills, as of part II/III, are rare.
- Strikingly, the learning objectives have been checked ambitiously.
- The most popular learning objective concerns app development for smartphones.

In the following, the popularity of answers is given next to each option.

Summary of participation

I am grateful to the students ('the subjects') for providing their answers. This is definitely a great way to get started with the course, as it shows me the limited background by the students and their expectations regarding the skills to be acquired. I will try to take these results into account.

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1   Indicator for "little to no software development background": 3 or less known concepts (in part I/III) combined with checked learning objective "to acquire basic programming skills" (in part III/III). All but 5 of these 20 subjects did not check the skill "I can write and run simple programs" and the 5 outliers did not claim any additional software development skill.

Questions

Software development concepts

Which of these concepts do you know about beyond the most basic level?

12 Web server[2]

3 Relational database

1 Model view controller

3 Client-server architecture

1 Web application framework

3 Modeling (with UML for example)

2 Interpretation versus compilation

3 Functional programming

4 Object-oriented programming

3 HTTP-based Web APIs[3]

2 Exception handling

2 Event handling

0 Agile development

0 Build management

1 Version control

1 Deployment

0 Scrum

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2   "Web server" was checked quite often alone, which may suggest that the subjects do not know necessarily understand this concept it is full meaning.

3   Two instances of checked "HTTP-based Web APIs" did not team up with much significant concept knowledge, which may suggest that this term was confused with something else.

Self-assessment of skills

Which of these skills do you have?

11 I can collaborate with developers in a business context.[4]

11 I can write and run simple computer programs in some programming language.[5]

3 I can test computer programs somewhat systematically.

1 I can use version control for collaborative development.

5 I can describe simple algorithms with simple mathematical models.

3 I can describe the design of programs with simple software models.

2 I can release a smartphone app through an AppStore.

6 I can deploy a web application through a hosting platform.[6]

(Claiming a certain skill should imply that you actually have practiced this skill in the near past.)

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4   The claim of the ability to collaborate with developers in a business context correlates more often than not with the lack of conceptual knowledge (part I/III) and development skills (part II/III). Thus, one may express doubts in the effectiveness of collaboration. This is not a problem – this is perhaps more of a supporting argument for this course!

5   These programming skills are bound to vary substantially, as 5 out 11 subjects did not substantiate these skills with conceptual awareness (part I/III) or language and technology awareness or other skills (both part II/III). Again, this is important to know because it forms the foundation of concluding that only 6 out 26 subjects in the complete study enter this course with significant background.

6   4 out of those 6 subjects claiming to be experienced with deploying a web application through a hosting platform did not indicate any additional conceptual knowledge or development skill, which may suggest that some misunderstanding happened for this question.

What are the programming languages you have noteworthy experiences with?

- **4** HTML

- **4** Java

- **3** PHP

- **2** VBA

- **2** JavaScript

- **1** Ruby

- **1** C/C++

- **1** Basic

What are other software development-related technologies (IDE, VCS, testing, build management, etc.) you have noteworthy experiences with?

- Database design[7]
- SQL
- CCS
- Frameworks (e.g., Zend)
- IDE (e.g., Net Beans or MS Visual Studio)

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7 We simply list all the entries (after some normalization) that were encountered.

Learning objectives

Which of these learning objectives do you consider compelling for the course at hand?

13 To understand how software developers think and work.

17 To acquire basic skills of programming.

4 To improve skills of programming.

19 To acquire basic skills of web application development.

18 To acquire basic skills of "app" development for smartphones.

12 To acquire basic skills of software modeling.

10 To acquire basic skills of software architecture and design.

2 To handle technologies for build management and version control.

12 To aggregate IT skills for your potential startup idea now or in the future.

0 To figure out whether you may want to be a software developer.

Any objectives you would like to add?[8]

- to acquire skills in HTML5/AJAX
- to be able to talk to programmers
- easy grade
- to understand what's possible
- to get an overview of what exists
- to get a basic understanding of programming
- to learn as much as possible

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8 Copied more or less from the answers provided by the subjects; no interpretation applied.