

## Software Development - Case Study

Smithfield Software Company (SSC) develops solutions for different companies. One of their specialities is the development of education management software for schools and colleges.

Below are two summaries around the introduction and customisation of a system into two educational establishments:

1. A faculty of Dentistry.
2. A School of Architecture.

1 Faculty of Dentistry	2 School of Architecture
<p>Week 1/2: Meetings with the College steering group made up of management, lecturers, tutors and students. SSC demonstrate the system and note the various needs and requests of the stakeholders SSC then plan the project, including milestones.</p>	<p>Week 1/ 2: SSC met separately with College management, lecturers, tutors and students, and listened to their individual needs and requests.</p> <p>Frequent meetings between SSC and representatives of students and management were scheduled, so issues around the project could be raised and discussed.</p> <p>At one of the early meetings, students and management requested that the passwords used for the new system be the same as those used for college systems. This was designed, coded by SSC, with <b>functional testing and User Acceptance testing</b>.</p>
<p>Week 3 /4: SSC meets to analyse the needs of the Dental faculty, and begin the design process.</p>	<p>Week 3 / 4 / 5 SSC begin to analyse the needs of the School of Architecture. The School would like to prioritise one aspect of the project – the part of the system, which allows for on-line submission of assignments.</p> <p>This on-line submission facility is designed / coded / tested in-house at SSC and by end-users in the School.</p>
<p>Week 5 / 6 /7: SSC design the complete solution (the output being a design specification document), Design in two stages:</p> <ul style="list-style-type: none"><li>- High-level design ((system architecture, user interface, data flow diagrams etc.)</li><li>- Low-level design (data modelling, entity-relationship diagrams, flow charts etc.)</li></ul>	<p>Week 6 / 7 /8 /9: SSC design and code other parts of the overall solution, and ask the School, at a meeting, if they require links to on-line repositories of Academic Journals. This is required by the School and it is designed, coded and tested as a priority.</p>

<p>Week 7 / 8:</p> <p>The solution is implemented (after coding and <b>functional and non-functional testing</b>), in the Dental Faculty's system and is tested extensively, including <b>User Acceptance testing</b>.</p>	<p>Week 10 / 11 / 12:</p> <p>The solution is implemented in the schools system and is tested extensively, including <b>User Acceptance testing</b>.</p>
<p>Week 9/ 10:</p> <p>The solution is introduced on a pilot basis for first-year students for two weeks, with further testing and tweaking of the solution.</p>	<p>Week 13 / 14 / 15:</p> <p>The solution is trialled by all students and SSC are made aware and deal with issues and suggestions on a daily basis for this time.</p>
<p>Week 12 / 13:</p> <p>The solution is rolled out to all students.</p>	<p>Week 16++:</p> <p>Weekly meetings between SSC and the School allow issues and ideas for improvement to be discussed and acted upon.</p>
<p>Week 14:</p> <p>A maintenance agreement is agreed between SSC and the Dental Faculty. An overall performance review of the new system is planned six months after roll-out.</p>	

Study the table above and answer the following questions:

- (i) What type of software development methodology is being used for
  - (a) The Faculty of Dentistry?
  - (b) The School of Architecture?
- (ii) Give two advantages of using a Waterfall model.
- (iii) Give two disadvantages of using a Waterfall model.
- (iv) Give two advantages of using an agile methodology.
- (v) Give two disadvantages of using an agile methodology.