D6tions: A Serious Game to Learn Software Engineering Process and Design

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Abstract : The software engineering teaching process has been the subject of many studies. To improve this process, researchers have proposed merely illustrative techniques in the classroom, such as topic presentations and dynamics between students on one side or attempts to involve students in real projects with companies and institutions to bring them to a real software development problem on the other hand. Simulators and serious games have been used as auxiliary tools to introduce students to topics that are too abstract when these are presented in the traditional way. Most of these tools cover a limited area of the huge software engineering scope. To address this problem, we have developed D6tions, an educational serious game that simulates the software engineering process and is designed to experiment the different stages a software engineer (playing roles as project leader or as a developer or designer) goes through, while participating in a software project. We describe previous approaches to this problem, how D6tions was designed, its rules, directions, and the results we obtained of the use of this game involving undergraduate students playing the game.