

Module Name: (A.2) Advanced Programming and Rich Internet Applications

Aim

The aim of this module is to introduce students to advanced programming concepts in the areas of Object-Oriented Programming, multiplatform development, and Rich Internet Applications.

Learning Objectives

The learning objectives include the knowledge, comprehension, applicability, analysis, design, and evaluation of advanced programming codes with the JavaFX framework. Moreover, students will be taught to transfer windows applications to all major mobile platforms (Android, iOS, Windows) as well as techniques on design and develop Rich Internet Applications.

Learning Outcomes

Upon successful completion of the course, students should be able to:

- design, implement, document, test, and debug, utilizing modern design patterns, for the following types of software:
 - general software
 - user interface components
 - multiplatform (including mobile platforms) software
 - Rich Internet applications
- discuss the aforementioned software in a productive way using appropriate terminology of the cognitive field.
- locate, interpret and combine source codes written in a variety of languages including java, javafx, python, javascript, html, and css in order to solve realistic problems
- search, analyze and synthesize data and information, using the necessary technologies
- work autonomously
- promoting free, creative and inductive thinking

Bibliography

- [1] Paul Deitel, Harvey Deitel, Java SE 8 Οδηγός για Προγραμματιστές, Τρίτη Έκδοση, Μ. Γκιούρδας, ISBN: 978-960-512-6827.
- [2] Liang Y. D, Εισαγωγή στον Προγραμματισμό Java, 10η Έκδοση, 2015, Εκδόσεις Τζιόλα, ISBN: 978-960-418-500-9.
- [3] The Java Tutorials, Oracle, <https://docs.oracle.com/javase/tutorial/>
- [4] Chairi Kiourt, Cross Platform mobile development, http://mphilcie.teiemt.gr/moodle/pluginfile.php/184/mod_resource/content/1/cross-platform%20mobile%20app%20development%20with%20javafx-2-2.pdf