Programming 2
(112)

Lecture 0

College of Computer Science and Engineering
Taibah University
S1, 1440

Outline

- Important Information
- Lecture Protocol
- Subject Overview
  - General Overview
  - Course Objectives
  - Studying Materials
  - Assessment
  - Assignments Policies
  - Syllabus
Overview

- Programming II
  - Course Code: CS112
  - Prerequisite: CS111 (Programming 1)

Important Information

- Lecturer:
  - Name: Rana Atef Tarabishi
  - Office: Al-jazira Building (B 230) - Room 376
  - Office hours: (Sunday: 8:30 – 9:35), (Monday: 12:35 – 13:15), (Thursday: 10:50 – 11:55)
  - Email: rtarabishi@taibahu.edu.sa
  - Website: http://www.rana-tarabishi.com

- Important messages, Lectures notes, Assignment description … etc, will be displayed on the course page (on the previous website)

- Consultations:
  - I will receive all of your inquiry by email, office hours or in the lecture time.

- You should check the website one day before the lecture time
  - (It is a good idea to check it early morning at the same day of the lecture time)
Lecture Protocol

- You have to shut down or silence your mobile phone and put it in your bag
- Recording lectures is not allowed
- You can go out for necessary situations
- Speaking, eating or drinking are not allowed in the lecture (except water of course 😊)
- You should be in the lecture on time
- 4 times late, will be considered as one absence
- You will fail in this course if you not attend 75% or more.

Course Objectives (Course Learning Outcomes)

Having successfully completed this course, the student will be able to:

1. Acquire advanced concepts of OO programming.
2. Present the syntax and semantics of the Java language as well as data types, packages and libraries offered by the language.
3. Develop skills in designing, implementing, and testing complex programs in Java language.
4. Develop competences in using an integrated development environment for large programs.
Course Description

- The **CS 112** course, designed for students with some programming experience, is intended to teach Object-Oriented programming concepts, techniques, and applications using the Java programming language. It covers the advanced concepts of OO programming using Java including the most used packages and classes.

Studying Materials

- **Required Textbook:**

- **References Materials:**

- Lecture notes + tutorial questions and solutions + assignment specifications + Lab Notes + attend lectures and labs are important

- Reading: suggested on the website (on Useful Link Page)
  [http://www.rana-tarabishi.com](http://www.rana-tarabishi.com)
Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>Marks</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid exam I</td>
<td>15</td>
<td>Week 7: Sunday 5/2/1440 (14 October)</td>
</tr>
<tr>
<td>Mid exam II</td>
<td>15</td>
<td>Week 12: Sunday 10/3/1440 (18 November)</td>
</tr>
<tr>
<td>Quizzes</td>
<td>8</td>
<td>Quiz 1: week 10 , Quiz 2: week 14</td>
</tr>
<tr>
<td>Assignment / Project</td>
<td>10</td>
<td>Will be announced on the lecture time and on the website</td>
</tr>
<tr>
<td>Labs work</td>
<td>2</td>
<td>During Labs time</td>
</tr>
<tr>
<td>Lab Exam</td>
<td>10</td>
<td>Will be announced on the lecture time and on the website</td>
</tr>
<tr>
<td>Final exam</td>
<td>40</td>
<td>Week 16 - 17: Between 20/8/1439 (6 May) and 29/8/1439 (15 May)</td>
</tr>
</tbody>
</table>

Assignments Policies

- Illegal collaborations are not allowed
- Class discussions is a useful way to discuss the assignments
- Penalties will be applied to plagiarism and late assignments
- No subjective marking
Syllabus

Topics Covered:

Lectures:
1. Introduction (Overview of programming)
2. Strings and enumerated types
3. Advanced OO concepts (Reuse): Aggregation, Inheritance, Polymorphism
4. Abstract Classes and Interfaces
5. Exception Handling
6. Graphical User Interfaces: GUI, AWT, Swing
7. Event-Driven Programming
8. Applets
9. Other topics based on the requirement of individual departments: Database Programming, Threads, Java Streams, Files and I/O, Network programming, Wrapper classes and conversions between data types, Event-Driven Programming

Laboratory:
1. Introduction and overview
2. Strings and enumerated types
3. Advanced OO concepts (Reuse): Aggregation, Inheritance, Polymorphism
4. Abstract Classes and Interfaces
5. Exception Handling
6. Graphical User Interfaces: GUI, AWT, Swing
7. Event-Driven Programming
8. Applets
9. Other topics based on the requirement of individual department
10. Mini projects (done by groups of 2-3 students and carry 15-20% marks)
11. Lab exam

The Book Chapters

<table>
<thead>
<tr>
<th>Chapter Number</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 9 - 10e edition</td>
<td>Objects and Classes</td>
</tr>
<tr>
<td>Chapter 10 - 10e edition</td>
<td>Object-Oriented Thinking</td>
</tr>
<tr>
<td>Chapter 11 - 10e edition</td>
<td>Inheritance and Polymorphism</td>
</tr>
<tr>
<td>Chapter 12 - 10e edition</td>
<td>Exception Handling and Text I/O</td>
</tr>
<tr>
<td>Chapter 13 - 10e edition</td>
<td>Abstract Classes and Interfaces</td>
</tr>
<tr>
<td>Chapter 14 - 10.e edition</td>
<td>JavaFX Basics</td>
</tr>
<tr>
<td>Chapter 15 - 10e edition</td>
<td>Event-Driven Programming and Animations</td>
</tr>
<tr>
<td>Chapter 16 - 10.e edition</td>
<td>JavaFX UI Controls &amp; Multimedia</td>
</tr>
</tbody>
</table>
Software

Java IDE (Integrated Development Environment)

- Netbeans for Java SE (or any platform)
- http://netbeans.org/downloads/

Any Question
???