Advanced Programming

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Course Overview

- Strengthen understanding of **software design, implementation, and analysis**.
- Main topics:
  - Object-Oriented Programming (OOP)
  - Multithreading & Concurrency
  - Networking & System Interaction
  - Software Testing & Design Patterns
- Focus on industrial workflow, collaboration, and real-world problem-solving.

Course Structure & Grading

Component	Score	Description
Project	8 + 3 bonus	Team project selected from a shared pool; bonus for outstanding results
Assignments	6 + 1 bonus	Five exercises, from Java basics to advanced concepts; bonus for early submissions
Exams	4 + 2	Two written exams (Midterm & Final); higher one counts more
Workshops	—	No direct grade; attending workshops is required to earn exercise points

Note:

Workshops are designed to ensure you understand and complete exercises properly.

Project Phases

- Teams select a **unique project** from a shared topic pool.
- Topics are distributed based on a ranked priority list.
- Roles:
  - **Product Owner:** manages project topics and mentors Product Managers.
  - **Product Manager:** prepares documentation and assists student teams.
- Weekly meetings ensure feedback, tracking, and mentoring.

Assignments & Workshops

- **Five Assignments**
  - Ex0 – Java Introduction
  - Ex1 – OOP Basics
  - Ex2 – Inheritance, Interfaces, Testing
  - Ex3 – Files, Streams, Concurrency
  - Ex4 – Advanced Topics & Patterns
- **Workshops**
  - Provide hands-on sessions aligned with assignments.
  - Attendance is required for assignment credit.
  - 4–6 sessions across the term.

TA Structure

- **Head TA:** Coordinates all teaching assistants.
- **Project TAs:** Mentor project teams and track deliverables.
- **Assignment TAs:** Design and grade exercises.
- **Workshop TAs:** Host practical sessions and labs.
- **Exam TAs:** Prepare, review, and monitor exams.

Course Rules & Collaboration

- **Team Projects:** 3 students per team (4 in special cases).
- All members must contribute equally.
- Non-participating members receive **zero** for the project.
- **AI tools** are allowed but explanations must be provided during defense.
- **Delays:** Maximum 5 days → -10% per day after deadline.
- **Extensions:** Allowed with prior collective approval.
- **Emergencies:** Flexible deadlines upon proof.

Platforms & Communication

- The course is active on:
  Quera, **Bale**, **Telegram**, and the Course Website.
- Announcements, materials, and grades are published on these platforms.
- Official communication via **course email** and **Bale group**.

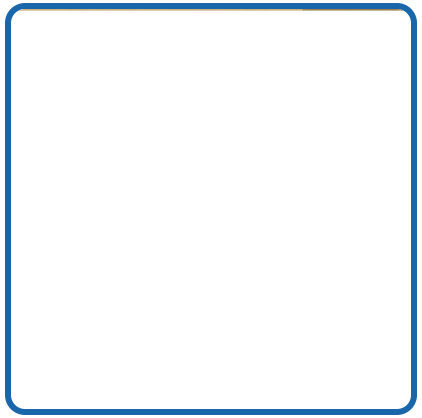
Instructor & Team

- **Lecturer:** Ali Najimi
  - B.Sc. in Computer Engineering – IT, Sharif University of Technology
  - M.B.A. (Strategy) – University of Tehran
- **Head TA:** Sohaib Sadeghy
  - CE1402
- **Slide Author:** Hossein Masihi
  - CE1401
- **Course Team:** Committed to academic and technical excellence.

Thank You 🙌

Good luck and enjoy Advanced Programming!

> “It works on my machine.” — The first lie every programmer tells.
> *And remember:* our instructor may not have a PhD…
> **but he debugs faster than any PhD ever could.** 🧠💻



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🎬 End of Presentation