

## Instructor Candidate Presentation Criteria

### Topic

Advanced Java Programming Concepts

### Objective

The purpose of this presentation is to assess your teaching style, as well as your ability to teach advanced Java programming concepts including object-oriented programming, user-defined classes, file operations, array operations, and performance optimization.

### Concepts to Cover

Develop and present a class lecture (30 to 45 minutes) that clearly and cohesively addresses the concepts below using the **Java** programming language.

#### Important Notes

- Assume students have the requisite knowledge to understand the covered concepts.
- Your lecture should avoid treating the concepts as separate domains of knowledge.

Concept 1: Object-Oriented Programming principles of **Inheritance** and **Polymorphism**.

Concept 2: Reading program data from an input file into an array of objects.

Concept 3: Searching an array of objects to produce a subset of the data.

Concept 4: Writing program data (subset of the array of objects) to an output file.

### Evaluation Criteria

- Clarity of Presentation
  - Lecture content, slides, diagrams, and code examples are well-organized and easy to follow.
- Code Quality
  - Prewritten code is clean, properly formatted, and includes clear comments.
  - Code examples effectively illustrate the concepts being taught.
- Technical Accuracy
  - All lecture material, diagrams, and program code are technically accurate and relevant.
- Engagement and Interaction
  - Effective teaching techniques used to involve and engage the audience throughout the lecture.
- Time Management
  - All required concepts are covered within the allotted 30 to 45 minutes.

### Tools & Resources

You may leverage lecture slides, prewritten coding examples, and live coding during your presentation. A Windows computer equipped with Eclipse, IntelliJ IDEA, and other standard development tools will be provided for your presentation. However, you may bring your own laptop or use your preferred coding environment, if you wish.