

PROGRAMMING PARADIGM

Revision Lecture

ASSESSMENT

- PGP Coursework 1 – Simple Arithmetic Calculation (10%)
- PGP Coursework 2 – Chinese Chess (12%)
- Quiz – Comparison between Java and Haskell (3%)
- Exam (75%)
 - Time allowed: 2 hours and 30 minutes
 - Additional material: Haskell standard prelude

PGP EXAM

- Four questions:
 - One purely Java question (25%)
 - One purely Haskell question (25%)
 - Two questions that relate to both Java and Haskell (50%)
- Type of questions:
 - No multichoice questions
 - Knowledge-based, e.g., conceptual questions...
 - Program-based, e.g., computational questions...
- Past exam papers: available on Moodle

JAVA CONTENT

- Properties of OOP:
 - Encapsulation:
 - Access modifiers
 - Package
 - Inheritance:
 - Superclass and subclass
 - Abstraction:
 - Abstract class and Interface
 - Polymorphism:
 - Overload and override

JAVA CONTENT

- Static vs non-static
- Override vs overload
- Abstract vs concrete
- Keywords: this, super
- Inner class: scope, name, creation, access modifier...
- Loops: for, while, foreach, label
- Recursive call in Java
- Generic data type

JAVA CONTENT

- Static vs non-static
- Override vs overload
- Abstract vs concrete
- Keywords: this, super
- Primitive type vs OO type: call by value, call by reference, data wrapper...
- Loops: for, while, foreach, label, break, continue ...
- If-then-else, switch
- Recursive call in Java
- Generic data type

JAVA CONTENT

- Inner class: scope, creation, access modifier...
- Input and output:
 - Stream: byte stream and character stream
 - BufferedReader and Scanner
 - FileReader and FileWriter
- Exceptions:
 - Checked vs unchecked
 - Try and catch
 - Throws