Lecture 1

Intro to package, class, methods, object

Java API

Recap of conditional and looping structures (If….Switch…For….While….Do..While)

Some classes used: JOptionPane, Scanner, String, Integer

Some methods used: parseInt(….), showMessageDialog(….), showInputDialog(…), format(….)

Lecture 2

Program parts(see notes)

Convention (Uppercase versus lowercase lettering)

Objects, Variables

Class header

method headers

modifiers, arguments versus parameters

static keyword (class methods/attributes, instance methods/attributes)

Intro to UML (VOPC, Class diagrams)

user defined methods,

user defined classes, class header

Lecture 3

Encapsulation, information hiding, public interface

Abstraction, capture only those details about an object that are relevant to the current perspective

Class (Attributes/methods)

Scope of attributes/methods

True encapsulation

Method overloading

Types of methods Constructors/accessor/mutator

Instantiation, object is an instance of a class

Keyword new/this

UML Class Diagrams

Lecture 4

Class

--- methods—class,instance

--- attributes/instance variable/data member/fields/class variables/constants

Types of Classes

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--- Utility classes ---- Collection classes--- Math

--- Wrapper classes

--- GUI/graphics classes

--- Instantiable classes

---- I/O classes

--- Network classes

--- Exception classes

Instantiable class: Animal

Design

Driver classes

Test classes

Array of objects…creating, populating processing and displaying

Javadoc --see notes

JUnit tests--- see notes

Lab week4

UML

VOPC

Visio

Animal

Array of Objects

Javadoc

Lecture 5

Class diagram

Inheritance

Superclass/Subclass

Interface

Creating an instance of a class within the class definition, compile time verus runtime

Fraction class (Test first)

Method overloading/overriding

Week 6 Exam