

Lecture Number	Topics Covered	Included Examples	Homework Problem 1	Homework Problem 2	Homework Problem 3	Time: Hour	Time: Minutes
1	Review: - Classes with Driver Class - Methods - Testing	- GPS Class	Dice Game	Dice Game Stretch Goal: Arrays		1	10
2	Review: - Dice Game - Arrays (Int & Bool) - For Loops - Designing Solutions New Material: - User Input (Scanner) - Do/While	- Retirement Algorithm - Scanner Example - Data Entry Error Checking - Scanner Do/While	Updated Dice Game: Do/While	Temperature Conversion	Temperature, Weight and Height Conversion	Part I: 0 Part II: 0	Part I: 55 Part II: 30
3	New Material: (Object Principals) - Static - Encapsulation - Date Objects - Pass by Value/Reference - User Input Validation: - Parsing - Expression based validation	Static Variable: - Student Count - Bank Transactions Count - Static Using Non-static Methods and Variables Constraints Encapsulation: - DOB and Age (Private var) - Public, Private, Default variable types example PBV/PBR: - Balloon Algo (Red & Black)(Red & Blue)(Both) User Input: - Parsing Algorithm Asking Info - Rows, Columns and Symbol - Expression Based Validation Eg.	Error Handling Final Example	Credit Card Structure Validation & Luhn Validation	Palindromic Number Check	Part I: 1 Part II: 0	Part I: 0 Part II: 45
4	Review: - Date validation code - Palindrome code New Material: - "This" keyword - Overloading Constructors - Immutable Objects and Classes - Error handling, try catch exceptions - Try-catch-finally - Date and time class	This: - This with class attributes eg. - This with overloading constructors eg. Immutable/Mutable - Circle class (Pi constant) - Student class (Mutable class) Error Handling - String entered into number text box Try and Catch Error Handling - Numeric input only - Arithmetic exception (/0) - Single try block with multiple catches - Catch all example - Try catch finally example - Do while with try catch combination Date and time class: - Date and time examples	N/A	N/A	N/A	1	25
5	Review: - This keyword - Overloading Constructors - Immutability - Try catch exceptions - Date formatting New Material: - Abstraction and Encapsulation - API's - Classes Relationships - Super keyword	Abstraction and Encapsulation: - Circle example - BMI (UML pseudocode, - + Hash) - Student BB --> UML - Gregorian Calendar birthdate simplification Classes Relationships: - Association example doctor for patient - Aggregation example lecture with module - Composition example glass house and room - Aggregation with the same class (supervisor) - Inheritance: Superclass and Subclasses UML example - Inheritance: Book, dictionary, words - Super: Faculty, Employee, Person	Beyond Designing the Loan Class	Class of Cards and Comparing	Book, Dictionary and Word Relationship.	Part I: 0 Part II: 0	Part I: 50 Part II: 50

6	Review: - Encapsulation - Relationships - Association, aggregation, composition and inheritance - Super keyword New Material: - Protected keyword - Inheritance - Abstract Classes - Overriding methods - Binding	Review: - Superclass constructor example super keyword - Super: Faculty, Employee, Person New Material: - Abstract Classes UML example - Overriding methods UML example - Binding examples types of binding	Relationship Between Classes	Array of Geometric Objects Abstract Classes	2nd Assignment	Part I: 0 Part II: 0	Part I: 55 Part II: 35
7	Review: - Abstract Classes - Overriding methods - Binding New Material: - Interfaces - Abstract classes vs interfaces - Default methods in interfaces	New Material - Silly interface example for syntax - Edible interface UML - Integer and BigInteger, and string and date comparable interfaces - Java interfaces	Complete the Circle			1	40
8	New Material: - Comparable (Comparing Geometric Objects) - File I/O, and editing a existing file - BufferedReader - BufferedReader v Scanner	New Material - Comparable (Comparing Geometric Objects) running through the classes and driver class - Read file as bytes - Printf call example - Read file as text - Buffered reader example - Scanner with file reading	Editing Text Files			1	20
9	New Material: - External Libraries - Java FX - GUI - IDE - IntelliJ IDE Install - Setting up Maven with IntelliJ - Enhanced for loop	New Material: - Example of stage, scene and node - JavaFX Layout Structure - Flow pane example - GridPane Example - Custom Pane Example - Horizontal Box Example - Vertical Box Example	Setup IntelliJ with Maven and JavaFX successfully	Review the Classes Displayed During Lectures		1	30
10						??	
11	New Material: - Data Structures - Multidimensional Arrays - ArrayList - Linked list - Queue and Priority Queue - Stack - Iterable interfaces - Lists interface - Deque	Data Structures: - Array example - Word count array example - array a set length only - ArrayList city list example - LinkedList - colours adding example - ArrayList example using the collection interface methods add, remove ... - Queue examples with methods - Deque example with methods - Priority queue US states examples	Plurals and Capitalised List of Word	List of Numbers Manipulation		1	20
12	New Material: - Comparable (Comparing Geometric Objects) - File I/O, and editing a existing file - Buffer reader - BufferedReader v Scanner	- Poker game discussed on a method by method basis	Final Assignment			1	15
						16	0