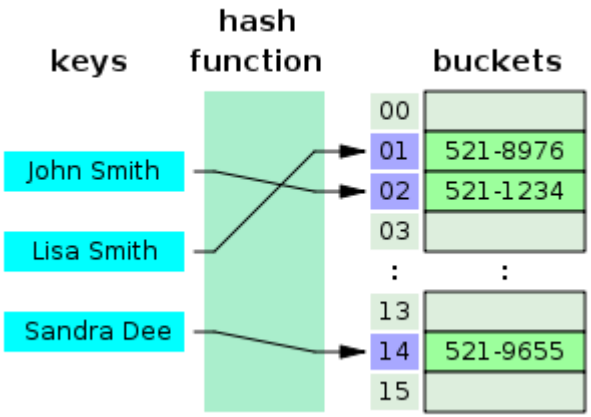
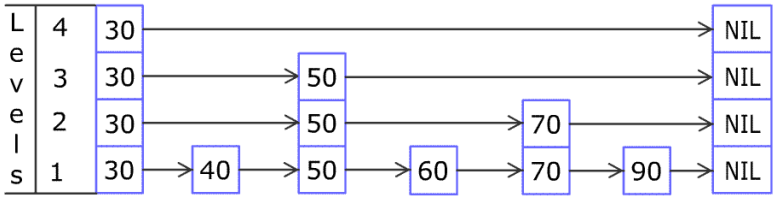
COSC 222 Data Structures

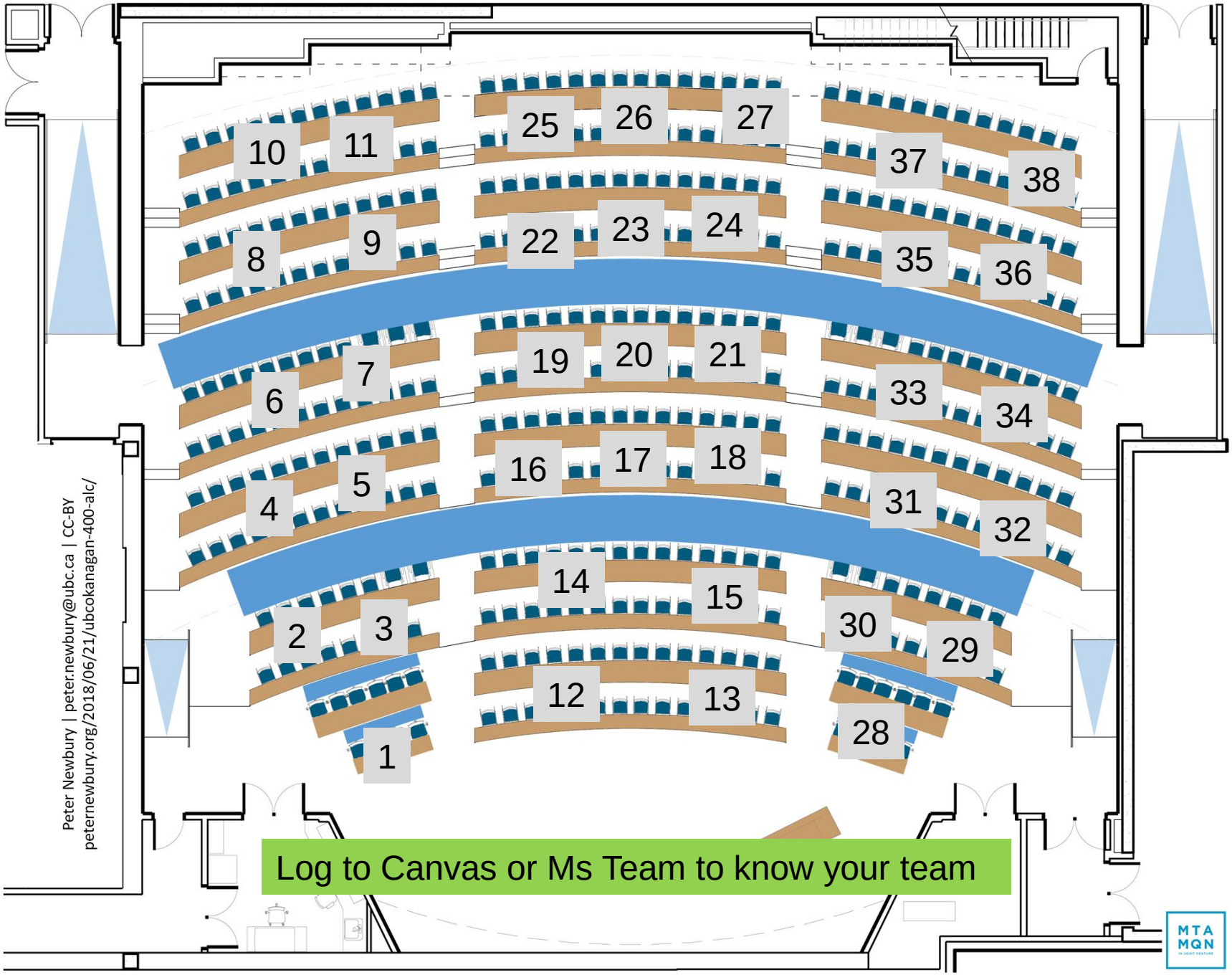
Yves Lucet





Generics & Testing

COSC 222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Log to Canvas or Ms Team to know your team
Peter Newbury | peter.newbury@ubc.ca | CC-BY
peternewbury.org/2018/06/21/ubcokanagan-400-alc/
MTA
MQN

Menu Today

- Announcements
- RAT: Arrays, Generic

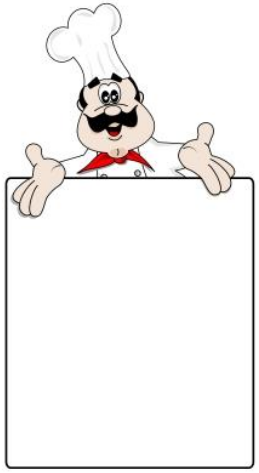
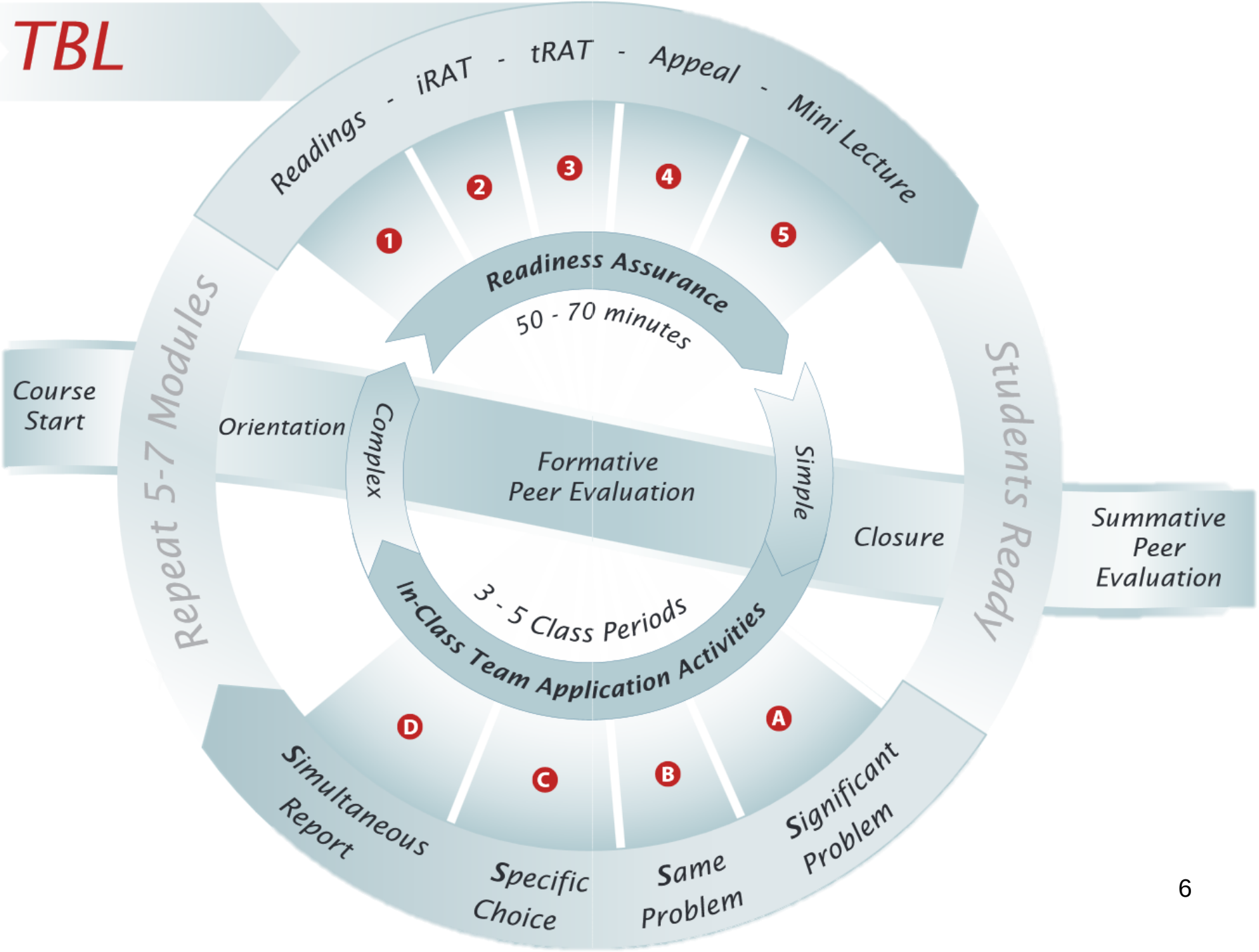


Image courtesy of
Grant Cochrane/
FreeDigitalPhotos.net

TBL


Readings - iRAT - tRAT - Appeal - Mini Lecture
1
2
3
4
5
Readiness Assurance
50 - 70 minutes
Course Start
Orientation
Repeat 5-7 Modules
Complex
Formative Peer Evaluation
Simple
Closure
Students Ready
Summative Peer Evaluation
In-Class Team Application Activities
3 - 5 Class Periods
D
C
B
A
Simultaneous Report
Specific Choice
Same Problem
Significant Problem

Wk	Class	Date	Activity	Reading/Prep given	Peer	Lab
1		Sep 06	Syllabus, TBL, Java review			NO LAB
	1	Sep 08	Git, testing	Java, Generics, Testing		
2	2	Sep 13	RAT1: generics; unit testing	Complexity		1 unit testing
	3	Sep 15	Lect: Complexity, streams	Lists		
3	4	Sep 20	Build & Critic (training)	iMAT1		2 coverage testing
	5	Sep 22	tMAT1	Recursion		
4	6	Sep 27	RAT2	Stack, Queue	Peer 1	3 generics
	7	Sep 29	Build & Critic	Iterators		
5	8	Oct 04	mini-lecture+exercises	iMAT2		4 generics
	9	Oct 06	tMAT2	BST, PQ, heap		
6	10	Oct 11	RAT3	Hash, skip list	Peer 2	5 streams
	11	Oct 13	Hash table, Skiplist, ex.	14.6 Shortest path		
7	12	Oct 18	Dijsktra+Competition ex.	Union-find		6 hashing
	13	Oct 20	Union-find/Disjoint sets	iMAT3		
8	14	Oct 25	tMAT3	Search Trees AVL/RB		7 Bipartite (cancel
	15	Oct 27	Lecture BST, AVL, (2,4), RB		Peer 3	
9	16	Nov 01	Midterm review			NO LAB
	17	Nov 03	Midterm			
10	18	Nov 08	Reading week			
	19	Nov 10	Reading week			
11	20	Nov 15	B-trees	B-Trees		8 Connected
	21	Nov 17	Range queries	iMAT4		
12	22	Nov 22	tMAT4	Text processing		9 Matching
	23	Nov 24	Pattern matching	KMP, BM, Trie		
13	24	Nov 29	RAT5	Huffman coding		10 Trie vs. BST vs.
	25	Dec 01	Huffman coding	iMAT5		
14	26	Dec 06	tMAT5		Peer 4	NO LAB

Questions?

RAT: inteDashboard

- Readiness Assessment Test
  - iRAT: Individual RAT
  - tRAT: Team RAT

InteDashboard™
Empowering Team-Based Learning With Technology

Appeal

- Each team can appeal questions that they struggled with
- only teams can appeal, no individual appeal
- present a written argument
  - ambiguity in the question
    - identify source of ambiguity
    - offer alternative wording
  - inadequacy of the reading/disagreement with answer
    - state reason(s) for disagreeing
    - support your view with specific reference from reading material
- appeals will only be considered after class
- results will be announced at the next class
  - team successfully appealing: get marks
  - team not appealing: keep mark for original answer

iRAT

30 min debrief based on students' answers

Summary

For Next Time

- Readings 2 readings-complexity.txt
- There will be questions on your understanding before moving on.

Lab 1

- Posted
- Follow instructions: Click on link, accept assignment, read instructions on GitHub, clone, etc. The TAs will help you get setup.
- Deadline is 1 week after the lab so your specific deadline depends on what lab section you are in.

Reference

- Eclipse Help “infer generic argument”
- https://dev.java/learn/generics/
- https://aioo.be/mirrored/java-theory-and-practice-generics-gotchas.html