Fundamentals of Computer Programming
Lab 2 - Selection and Loops

Spring 2019

Solve the following problems from text book:
"Y. Daniel Liang, Introduction to Programming with C++, Pearson Educational Limited 2014."

Chapter 3 "Selection" – Problems:

3.1 Quadratic Equation (usual if-else)

3.2 Check numbers divisibility (commonly needed op)(try ternary op)

3.5 Find future dates (if with many cases ==> can we use switch?)

3.7 Sort three integers (nested conditions)

3.8 Comparing Integers [Triangle Type] (use of composite condition)

3.12 Game: Even or Odd (Random generator)

3.21 Pick a card (ranged randomness)

3.25 Rectangles overlap (some Geometry + if)

Chapter 5 "Loops" – Problems:

Extra Problem: Write a program to print "a" or "b" for 100 times but probability of printing "a" is 30% and "b" is 70%

5.6 Conversion from meters to feet (Tabular form)

5.37 Summation (pattern sum)

5.10 Find the lowest price (Loop + if)

5.14 Find the largest n such that 2^n < 30,000 (while loop)

5.1 Count +ve and -ve numbers and compute the average of numbers (do-while)

5.41 Occurrence of max numbers (more logic)

5.35 Fibonacci Series

5.55 Math tutor