Data Structure: CS 21200 Fall 2020 Rof Greorge Wolberg Md Shahid Fondad 23726181

VI market

Midterm (Part 1: Chap 1-3)

## Problem 1.1

formula

big-0 notation

o lon

o 2n²

o 3log(n)

o 2n²+10

o 0(n²)

Problem 1.2 greatest to least time requirements

assuming n is very large.

nº +; 10n+10,000; 50 log n; 1,000,000.

## Problem 1:3

The simplest big-0 expression will be O(n2) because the operation is itimes which means it will keep iterate and usage the greatest runtime.

Problem 1.4

The onswer is D.

Depends on the code, the program may give different output.

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1.1 0.010.81

C.L. Michel

Problem 1.5.

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to bidal 500

Problem 1.6

Problem 1.7

Roblem 1.8

Problem 1.9 trounsvinger anit lead of leakong

Problem 1.10

100 & 00001+ 0018 + "n 1+2+3+4+5+6+ -- . +n

= n(n+1)

= 0(v2)

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may pine different subject.

Explanation!

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The number is keep increasing therefore it is O(m), the greatest run time. There is no end of n value.

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sometimes should

Rollem 1.4

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# Chapter 2

## Problem 2.1

An object is on instance of a class. Class is an use-defined type or with begword class, st contains duta and functions. Basically, a class is a template for objects. The Company Die Nambhanna Mill Problem 2.2

throttle quiz; Mdeclare the object quiz. shut off(); 11 call the function to shut off the flow

cout ((quiz.flow() Lend); //print out as you sall to someth flow From sully gill, sometime

#### Problem 2:3

A macro quard is to prevent duplicate inclusion of header files.

# if ndef FILE-H

# define FILE\_H

# endif

somotoni mo si toprdo mi Problem 2.4

Const reference parameter.

this sencentence with program as some of passing by reference and the Function

Thes sertence will program some as passing by reference. This will only be used if the value needs to be modified, otherwise the value will remain some. Therefore, if the user don't pass by reference, the value won't chappe.

Problem 2.5

Problem 2.6

Problem 217

0

Problem 2.8

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Problem 29

Problem 2.10.

0

Chapter 3

Problem 31

Problem 3:2

Problem 3:3