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**Data Structures & Algorithms 2**

**Project 4**

**User’s Manual**

**Setup & Compilation**

* Download and unzip the submission from eLearning on a Linux box in the mutli-platform lab.
* The submission includes:
* main.c
* makefile
* t1.txt
* t2.txt
* t3.txt
* t4.txt
* FunctionalDecomposition.txt
* UsersManual.docx (this file)
* Environment: This program has not been tested in the multi-platform lab but may run there. Idk.
* Compiling: This program includes a makefile. At the command line in Linux, type make. The program produces an executable entitled 'project4'

**Running the program**

Issue the command ./project4. No command line arguments are required or checked

**User Input**

None.

**Output**

All output goes to the console. Output will be similar to this:

$ ./project3

SIMULATION 1

Number of batches of items: 100

Number of items in each batch: 2000

Percentage of batches containing bad items: 24%

Percentage of items that are bad in a bad set: 7%

Items sampled from each set: 30

Generating data sets:

Create bad set batch 0, totBad = 140, total = 2000, badpct = 7

Create bad set batch 2, totBad = 135, total = 2000, badpct = 7

Create bad set batch 3, totBad = 144, total = 2000, badpct = 7

Create bad set batch 5, totBad = 141, total = 2000, badpct = 7

Create bad set batch 9, totBad = 138, total = 2000, badpct = 7

Create bad set batch 12, totBad = 152, total = 2000, badpct = 7

Create bad set batch 14, totBad = 167, total = 2000, badpct = 7

Create bad set batch 24, totBad = 142, total = 2000, badpct = 7

Create bad set batch 27, totBad = 144, total = 2000, badpct = 7

Create bad set batch 32, totBad = 142, total = 2000, badpct = 7

Create bad set batch 41, totBad = 147, total = 2000, badpct = 7

Create bad set batch 43, totBad = 132, total = 2000, badpct = 7

Create bad set batch 52, totBad = 132, total = 2000, badpct = 7

Create bad set batch 53, totBad = 132, total = 2000, badpct = 7

Create bad set batch 56, totBad = 142, total = 2000, badpct = 7

Create bad set batch 59, totBad = 151, total = 2000, badpct = 7

Create bad set batch 69, totBad = 134, total = 2000, badpct = 7

Create bad set batch 71, totBad = 139, total = 2000, badpct = 7

Create bad set batch 73, totBad = 144, total = 2000, badpct = 7

Create bad set batch 81, totBad = 131, total = 2000, badpct = 7

Create bad set batch 85, totBad = 141, total = 2000, badpct = 7

Create bad set batch 86, totBad = 133, total = 2000, badpct = 7

Create bad set batch 94, totBad = 145, total = 2000, badpct = 7

Create bad set batch 97, totBad = 139, total = 2000, badpct = 7

Total bad sets = 24

Analyzing data sets:

batch 0 is bad

batch 3 is bad

batch 5 is bad

batch 12 is bad

batch 14 is bad

batch 24 is bad

batch 27 is bad

batch 32 is bad

batch 41 is bad

batch 43 is bad

batch 53 is bad

batch 56 is bad

batch 59 is bad

batch 69 is bad

batch 71 is bad

batch 81 is bad

batch 85 is bad

batch 86 is bad

batch 94 is bad

batch 97 is bad

Base = 0.930000 exponent = 30

P(failure to detect bad batch) = 0.113367

Percentage of bad batches detected = 98.8%