ELEN4020: DATA AND INTENSIVE COMPUTING LABORATORY EXERCISE 1

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Abstract: The abstract

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1 INTRODUCTION

This main focus for this laboratory was to create a methodology to perform operations on multidimensional arrays of varying size. The exercise makes use of the C programming language to create three procedures that operate on K dimensional arrays. These three procedures take as input; a K dimensional integral array, the dimensional bounds of that array and an integer for the total number of dimensions within the array. The purpose of the procedures are:

1. Set all elements in the array to zero.
2. Set ten percent of the elements in the array uniformly to one.
3. Select five percent of the elements in the array and then display their coordinates and value.

Additionally a main program is written to create four arrays, the procedures that are developed are run on each of these arrays.

2 PROBLEM SOLUTION

This problem was solved by operating on a one dimensional array which is mathematically manipulated to act as a multidimensional array. This allows for k dimensional arrays to be created, for the procedures.

3 INSTRUCTIONS TO ACCESS THE REPOSITORY

4 CONCLUSION

REFERENCES

[1]