# Project 1

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### **1** Problem Statement

We are required to analyze the following program/code sample.

```
int j = 2
while (j < n) {
    int k = j
    while (k < n) {
        Sum += a[k]*b[k]
        k += n<sup>1/3</sup> log n
    }
    j = j*sqrt(5)
}
```

### 2 Theoretical Analysis

Explain your theoretical estimate in 3-4 sentences.

#### Reasoning

Mathematical expressions.

Summations, etc

### **3 Experimental Analysis**

#### 3.1 Program Listing

(Feel free to include only selected portions if you like. For example, I would like to know which values of "n" you ran the program for.)

#### 3.2 Data Normalization Notes

Do you normalize the values by some constant? How did you derive that constant?

### 3.3 Output Numerical Data

n	Experimental	Theoretical
Remember, you have to choose the RIGHT values of n for the charts to be meaningful.		

#### 3.4 Graph

3.5 Graph Observations

## **4** Conclusions