**Sample Structure of Report for Algorithms & Analysis Assignment 1**

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We certify that this is all our group’s original work. If we took any parts from elsewhere, then they were non-essential parts of the assignment, and they are clearly attributed in our submission. We will show that we agree to this honour code by typing ``Yes": YES.

**Experimental Setup**

# Describe briefly how you generated your data?

We generated our data through creating a new List of Points that can be retrieved from the Dataset. This is so we can access the List of Points through an Iterator that has the ability to retrieve the values one at a time, whilst simultaneously obtaining values from the Point and other classes’ constructors, especially for comparison reasons in order to shift values accordingly.

# What parameter settings you decide to test on, and briefly why?

Generation of scenarios – how did you decide to generate the scenarios? Briefly describe.

Timing - How did you perform the timing? How many tests did you perform and average over for each generated data set?

**Evaluation**

Scenario 1 (k-nearest neighbour searches)

[Sample text] We found that k, the number of nearest neighbours increased, the naive, brute force performance degraded (see Figure 1). We hypothesise the reason for this is that as k increases, it takes longer to check each point against the current k-nearest neighbour. Compare this kd-tree performance (Figure 2)….

Scenario 2 (Dynamic points set)

[Sample text] As we performed more adds and equivalent number of deletions to the kd-tree, we found that ...

**Recommendation**

For different scenarios, which data structures do you recommend to use?