**Annexure 2**

**Applied Computational Statistics**

**Project Report**

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Weight Loss, A Case Study

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Weights Before and after

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Graphical user interface, text

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**Step 1: Assumptions (Conditions):**

* A quantitative variable for two independent groups.
  + Quantitaive variable is the weights of Individuals
  + Grouping variable is the Weight before and after diet.
* Size of sample > 30 or < 30 for both groups.
  + n1 and n2 = 10
* Is the population/sample approximately distributed.?
  + Using sample to estimate the population distribution, so as to see if it is
    - free of Outliers
    - Symmetric
    - Unimodal
  + Box Plot : None have outliers.

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**Step 2: Calculating the Interval**

1. We could begin by computing the sample sizes (n1 and n2), means, and standard deviations (s1 and s2) in each sample.
2. The parameter of interest is the difference in population means, μ1 - μ2. The point estimate for the difference in population means is the difference in sample means:

Text

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1. Calculating Pool Standard Deviation

Since we are taking datasets from same area, it will be pooled and independent.

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Graphical user interface, text

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1. If n1 < 30 or n2 < 30, use the t-table:

Diagram, schematic

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1. For 95% interval and df = 18

Table

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1. Plotting Appropriately

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Chart

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Interval:

0.038 < < 18.127

**Step 3: Inferences And Interpretation**

The researcher is 95% confident that the difference in population average of **weights before and weights after is between 0.038 and 18.127.**

The point estimate for the difference in **population means is 9.08** with the **error of 9.044.**

**Hence we are 95% confident that the population mean for weights before is more than the population mean test score for weights after by between 0.038 and 18.127. Therefore, we can say that the plan is indeed *EFFECTIVE.***