# CP2403 - Project – Part 2 - ANOVA

First Name: Anh Duc

Last Name: Dang

We want to find out if the mean number of dengue cases (total\_cases) in a week is equal for the cities San Juan and Iquitos

|  |
| --- |
| **Step 1: hypothesis** |
| Null hypothesis (Ho):  The mean number of dengue cases (total\_cases) in a week is equal for the cities San Juan and Iquitos. |
| Alternative (Ha) hypothesis:  The mean number of dengue cases (total\_cases) in a week is not equal for the cities San Juan and Iquitos. |
| **Step 2: Data Selection** |
| The number of dengue cases in San Juan city and Iquitos city |
| **Step 3: Assess the evidence (ANOVA)** |
| F-statistics: 115.0 |
| Prob(F-statistics): 8.08e-26 |
| Mean values:  Iquitos 7.662896  San Juan 34.185027 |
| STD values:  Iquitos 11.295332  San Juan 51.408689 |
| **Step 4: Draw Conclusion** |
| * The mean number of dengue cases in Iquitos is 7.6 cases a week * The mean number of dengue cases in San Juan is 34.2 cases a week * p <0.05 (p = 8.08e-26) so reject null hypothesis and accept alternative hypothesis * Accept (The mean number of dengue cases (total\_cases) in a week is not equal for the cities San Juan and Iquitos. * The mean number of dengue cases in San Juan city (34.2) is more than the mean number of dengue cases in Iquitos city (7.6) |
| **Box Plot of dengue cases in a week for San Juan and Iquitos** |
|  |