**ANALYSIS:**

**Descriptive Statistics:**

The data was collected by conducting a survey among four developers. We analyze and discuss these illustrations using the qualitative data collected by performing a survey on the amount of experience the developers had on java, the number of times they’ve googled while implementing the code, how much time they’ve taken to run the code etc.

The Java developers experience is first noted. Then the experimental analysis is done by finding the number of times a developer has googled while compiling the code using both C++ and C#. This metric helps to know how much knowledge a developer has in the particular language and how much he’s trying to learn from other sources. According to our analysis it is found that half of the developers have googled more while implementing C++ and the other half while implementing C#. The next thing we looked into was the difficulty one faced during compiling the code using each language. Here, we could analyze that the developers didn’t entirely feel easy but they’ve found it moderately hard to very hard. The next metric used was to find the number of test cases successfully implemented. Here, we found that 75% have successfully implemented all the three tests while using C++ and 50% have successfully implemented all the test cases and could finish the task. The final metrics we used was how long one took to implement the code. Interestingly it is found that C# is implemented faster than C++.

**Data set Reduction:**

Data set reduction is done so as to obtain an ordered data in simplified form. Here, the whole data is being reduced to only one metric so as to perform hypothesis testing where we’ve used the metrics number of times one had to google while implementing the code.

**Hypothesis Testing:**

The hypothesis considered

H0: C++ and C# are equally easy to learn for a java developer

H1: C# is easier to learn than C++ for a java developer

To test this Paired t-test is used.

A screenshot of a cell phone

Description automatically generated

The paired t-test is performed using the above formula. Using the data collected the paired t-test is performed and the following values are obtained.

The paired t-test is done for the metric number of times a developer googled while implementing the code.

t= 0.20851

df=3

mean C++ =9.75

mean C# = 9.25

The value of p = 0.8482

This means a significant

INTERPRETATION:

By collecting the data and analyzing the data it is expected to obtain certain results that could verify the hypothesis of an experiment or sometimes even help to draw conclusions. Most importantly to get some answers for the questions raised during the experiment. There could be many drawbacks also following this approach due to various reasons. Sometimes it may not be possible to test the hypothesis using the data that has been collected as it may be too small or after performing the tests one might have other different idea of performing a test.

In the experiment performed, the hypothesis testing might be affected due to the availability of a small dataset. Had it been a larger dataset the values might have been differed. So, while conducting an experiment it is very important to have a proper audience, large datasets because larger datasets tend to have more efficiency.