Lab 3 Homework:

Your homework this week is to compile two separate conclusions. The first conclusion is to be based off of the Superhero Figures provided during class. The second conclusion you write is for the “Manipulating Mindset to Positively Influence Introductory Programming Performance” paper you read for last week’s homework.

**Superhero Figure 1 Conclusion**

Please insert your conclusion for the Superhero Figure below.

The figures show different superheroes by comparing their number of abilities, intelligence, power, and combat skills. The numbers varied greatly, ranging from 30 abilities at the highest to 1 at the lowest. The other three metrics had a similar high and low to each other, ranging from about 99 to 40. An outcome like this had some aspects that were to be expected, in that different superheroes have widely differing qualities. We expected some to be very different from each other in each aspect, but for some to be similar to each other as well. We expected this because superheroes gained their abilities and other qualities in vastly different ways and circumstances. However, because they’re superheroes, we expected them all to show similarities in the other qualities despite their vast differences in the process of gaining those qualities and the abilities that they acquired. We chose to do the experiment this way because the qualities of intelligence, power, and combat skills are core qualities of superheroes and a good way to categorize them. We showed the number of abilities in a different figure because, as can be inferred from the data, the number of abilities doesn’t always correlate with their other core attributes. A problem with doing the experiment this way however was that it’s difficult to gauge things such as intelligence with so many different situations that superheroes face. One may be extremely intelligent pertaining to one thing while lacking in another in which a different superhero may excel. In a future experiment we may combat this problem by identifying likely situations a superhero may be placed in and gauge their intelligence by evaluating them based on a wide variety of situations, as well as take into account how well they employ their abilities in handling the situation.

**Manipulating Mindset Conclusion**

Please insert your conclusion for the “Manipulating Mindset…” paper below.

This experiment was intended to test if developing a growth mindset improved test scores and involved 8 different variations in this approach but focused mainly on mindset training (MT) and rubric (R) interventions in tutor groups. The number of students were 101 in total with 11 students in both MT and R, 28 in R only, 29 in MT only, and 33 in neither. The expected outcome was that mindset training and rubric interventions would improve student performance by developing a growth mindset rather than a fixed mindset. We expected this because previous research suggested that mindset interventions positively affected students performance, we wanted to conduct another experiment to further suggest this conclusion. The reason we did the experiment this way was to try and create an equal opportunity for students while still preforming an experiment. We also implemented the experiment in tutor groups to ensure the delivery of the experiment was consistent and relatively controlled. By conducting the experiment this way, we can infer that both mindset training and rubric interventions positively affected student performance, especially by week six, which is why we standardized this approach for all students to give all equal opportunity to do well on tests. However, a problem with our approach was inconsistency in how tutors delivered the mindset training. Future experiments should ensure more consistent in delivery of mindset training, for example through more detailed tutor training and monitoring.