**Introduction to Excel Exercise Sheet**

CODE Workshop 2023

1. **Exercise 1**: A project developed by a team of scientists wanted to find out what was the best handwashing method to eliminate bacteria. The gathered multiple participants and told them to wash their hands using the different methods they were testing. After the participants washed their hands, the scientist performed bacterial counts for each participant. You were charged with verifying, organizing, and summarizing their findings. The results can be found on the provided excel sheet. Answer the following questions or perform the indicated action.
   1. The hand washing method “Water” is misspelled as “Witer”. Please fix this typo
   2. How many participants took part in the study?
   3. How many methods were tested?
   4. How many participants were there for each method?
   5. Divide all of the bacterial counts by 100
   6. Multiply all of the bacterial counts by 100
   7. Sort your methods by alphabetical order (A-Z)
   8. Which method killed the least bacteria in total? Which method killed the least bacteria on average?
   9. Summarize the results in a graph.
   10. BONUS: What is the sum of all of the methods that use soap (i.e., soap and antibacterial soap)?
   11. BONUS: Convert your columns to rows
2. **Exercise 2**: You are a Marine Biologist, and you are in charge of creating a new aquarium for Oklahoma. Two companies will sell you all the fish you need. However, you can only buy one individual of each species (i.e., you can’t have two fish from the same species). Each company sent you their list of species. It is your job to prepare a list of all of the species you need to buy and avoid buying the same species twice.
   1. How many species are shared between the two companies?
   2. How many species are unique to each company?
   3. Your supervisor wants all the names to be written in lower case
   4. You will also need to assign each species a code after their name. The code will start with the letters “sp” followed by a number from 1 to however many species are there. Example: Acanthochaenus\_luetkenii\_sp1, Ameiurus\_melas\_sp2…..
   5. BONUS: What if you wanted to separate the names by column?
3. **Exercise 3**: Six participants took place in a race tournament consisting of 76 different courses. As part of the organizing team you are tasked with determining the winner. The winner of the course is the participant with the lowest score on that course. At the end, the participant that won the most courses is the champion.
   1. Determine the winner of the tournament.
   2. How many courses did each participant win?