**PS4** **Edit Distance**

This assignment was implementing the DNA sequence alignment. This one really helpful for who want to know about analysis DNA (gene), also next semester I will take bioinformatics class which is writing a code to analysis difference DNA sequence so this one was a start point for me to understand how the DNA works.

I based on what professor went over in class how to get the alignment. And also I use the idea from Princeton to calculate the alignment. To find the alignment itself, I check from the top-left to bottom-right. At the top-left, if both letters is same, I will go diagonal, else, it will check to find the smallest number from bottom-left to bottom-right and top-right. Finally, it based on where it so it can either get penalty or gap and final will calculate the edit distance. The method mostly comes from Princeton website. The hardest part for this assignment was known how to fill out the DNA matrix table and understand how to get the correct edit distance and the optimal alignment.

Output:

