This assignment focusses on the how to get the result of basic trigonometric functions and exponential function by recursive function. We use Taylor series to approximate the value, using Padé Approximation to optimize the efficiency.

1. The main reason for the differences is the number of terms of the Taylor series. With the more terms, it will be more accurate.

2. The other reason is caused by the position of number, which means the differences with 0. We use McLaurin series to calculate, which center at 0. That means, the differences between the number with 0, the exponential will be more different.

3. Also, the “double” type plays a role in affecting the calculation. It has limited memory to store the value, which is not exactly the actual value. Therefore, this also cause a different.