I. Project Title: Prime and Pseudoprime.

II. Supervisor

Dr. Sun Pak Kiu

III. Project Description: A *pseudoprime* is an integer that shares a property common to all prime numbers but not a prime. On the one hand, this project is to study the Fermat pseudoprime, strong pseudoprime and Euler pseudoprime. On the other hand, Mersenne prime and perfect number will also be studied.

Key Reference:

1. Kenneth Rosen, *Elementary Number Theory and Its Application*, Pearson, 2010.

2. H. Davenport, *The Higher Arithmetic*, Cambridge University Press, 8th edition, 2008.

3. Joseph H. Silverman, *A Friendly Introduction to Number Theory*, Pearson, 2012.

4. John Stillwell, *Elements of Number Theory*, Springer, 2003.