Topics for Week of October 25th, 1999

Estimates and Asymptotic Notation (Reading Source: F97 Lecture Notes 9)

- Estimating $n!$ using Sterling's Formula - upper and lower bounds
- Asymptotic notation for bounding function growth and algorithm running times
  - O notation
  - θ notation

Linear Recurrence Relations (Reading Source: Rosen 5.1-2, F97 Lec Notes 11)

- Modeling problems with recurrence relations – setting up recurrence and boundary conditions
- Solving linear homogeneous recurrence relations with constant coefficients
- Solving linear inhomogeneous recurrence relations with constant coefficients
- Telling Example: Fibonacci Numbers