

**EE511 Fall 2018 PROJECT #0 – Coin Tossing**

**\*\*DUE MONDAY August 31 (5pm)**

A) Simulate tossing a coin 100 times and record

i) the number of heads  $N_H$

ii) the length of the longest run of heads  $L_H$

B) Simulate repeatedly tossing a coin and record the number of tosses until: the first head occurs  $S_1$ ; the first time 2 heads in sequence occurs  $S_2$ ; the first time 3 heads in sequence occurs  $S_3$ ; the first time 4 heads in sequence occurs  $S_4$

e.g. if the observed sequence is: TTHTHTHHTTHTHHHH

you would record  $S_1 = 3, S_2 = 8, S_3 = 15, S_4 = 16$

Do 5000 repetitions (samples) to find the frequency distribution of the items recorded (random variables).

Deliverables for this assignment include commented source code and a brief description of the program, the data from your experiments and a discussion of the results. The presentation should be: concise, attractive (use graphics when appropriate), understandable.

**Project will be graded to provide feedback but will not count toward semester grade.**