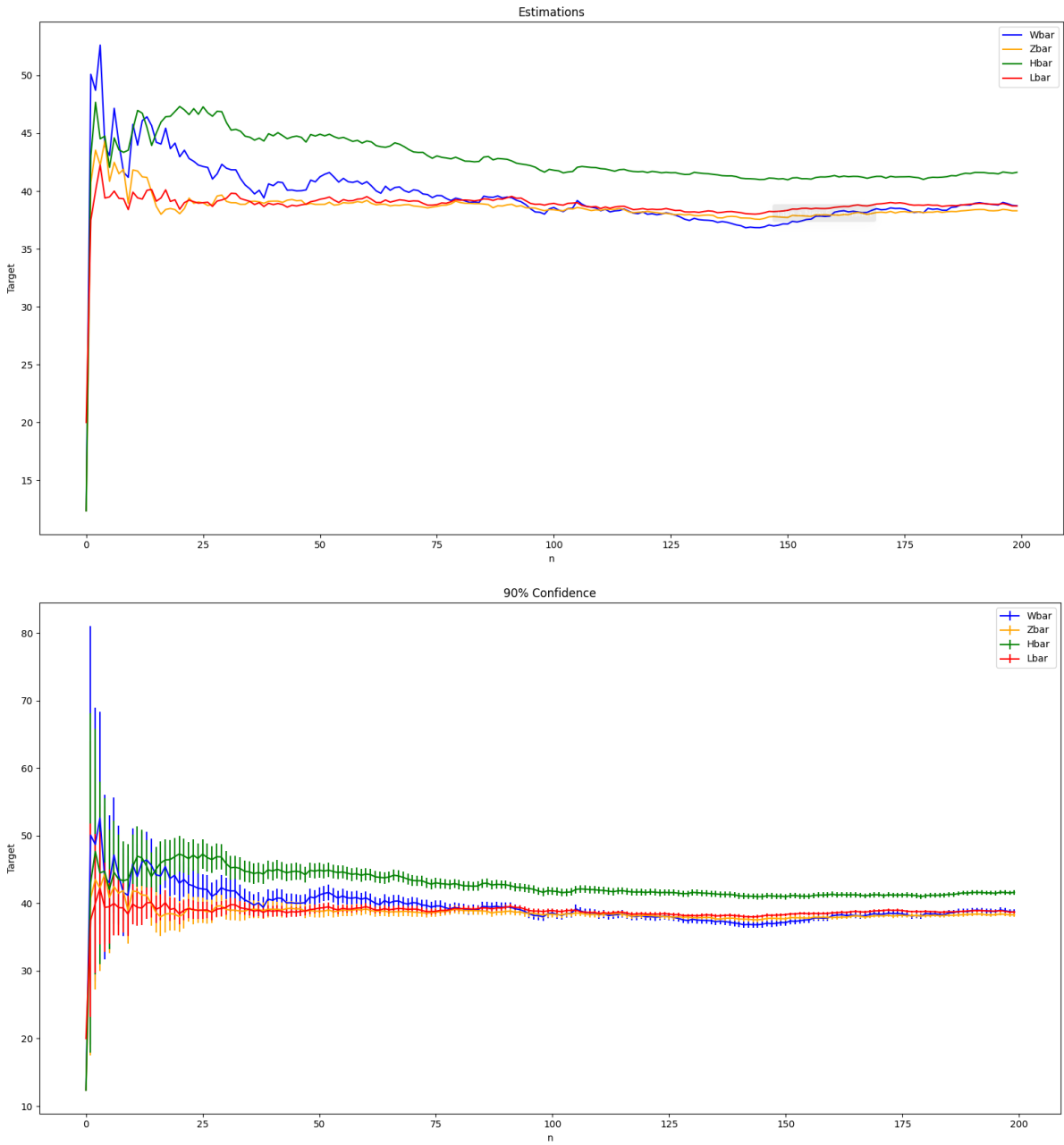


Penalty Free Late Submission  
Assignment 1



For estimator  $\bar{W}$  (problem 1a), the minimum number of simulation runs needed to be 90% confident that the estimated value lies with  $\pm 10\%$  of the estimated value is 12.

For estimator  $\bar{Z}$  (problem 1b), the minimum number of simulation runs needed to be 90% confident that the estimated value lies with  $\pm 10\%$  of the estimated value is 11. This is about a 9% improvement over the raw estimator.

For estimator  $\bar{H}$  (problem 1c), the minimum number of simulation runs needed to be 90% confident that the estimated value lies with  $\pm 10\%$  of the estimated value is 11. This is about a 9% improvement over the raw estimator.

For estimator  $\bar{L}$  (problem 1d), the minimum number of simulation runs needed to be 90% confident that the estimated value lies with  $\pm 10\%$  of the estimated value is 8. This is about a 33% improvement over the raw estimator.