WEEK 3 ASSIGNMENT

Write a 1-2 page response to your readings. You may choose some questions from the list below, but you are encouraged to raise your own questions. Your paper must touch upon all the readings assigned for the upcoming session. Some sections in the readings are highly technical; you can skip the technical details and focus on a larger argument. Please spell-check and proof-read your paper before submission.

1. How was the notion of randomness redefined in the context of digital computing? Would you accept computer-generated sequences as random? Can you give other examples of our intuitive notions being revised when faced with possibilities and restrictions of computer implementation?
2. Is programming closer to theorizing or experimenting?
3. Do you agree with Galison that computer programmers in physics have a "dual role as marginal and necessary" (p. 732)? Would this apply to other fields as well?
4. What are the advantages and the disadvantages of computer simulation as compared to laboratory experiment? Is computer simulation a step toward reality or a step away from it? Should computer simulation count as science? Should PhDs in science be awarded for work based exclusively on computer simulation?
5. Can computer models serve as a common language for specialists from different fields? Do you agree with the parallels Galison draws between the evolution of function of computer simulation and the three types of trading languages: foreigner talk, pidgin, and creole (p. 770)?
6. What role did the reality/simulation distinction play in the ways computer simulation specialists dealt with moral issues associated with working on nuclear weapons? Can we always draw a sharp line between simulation and reality?