James Johnston
Week1 Activity 1&2

List and briefly describe computers that you have
used/owned.
Highlight features that amazed you.
List things that worked well and things that didn't.

-eMachine Desktop- I have owned very few computers in my life time. In the beginning of my
relationship with computers they were pretty expensive for a high school student with a part-
time summer job. My family owned one of the first eMachines, a cheaper retail PC. It ran
windows 98 I and was one of the first computers that I really got to play with. I remember it
being one of the first times that I was able to play DOOM on at home and not after school.
-Dell Desktop- I can remember it being the first PC I ever owned myself. It ran windows XP and was
equipped with a CD burner. At the time Limewire was a big thing and downloading new music was a big
thing. I would burn CD after CD with mix tapes of my favorite artists.
-Acer Net book- I remember running windows vista on it and dual booting OS X on it. I was amazed at its
light processor could handle such a build but it was well worth it. I made a make shift doc for it and used it
as my primary computer for a while.
-Apple MacBook- I rebuilt a my friend's macbook who had gotten a replacement mac after someone
damaged the logic board. I replaced the board with a Chinese refurbished A1278 unibody board. I also
changed out the keyboard and the fan. I was really eager to use OS X and start using apple products.
-Apple MacBook Pro- I finally bought a MacBook Pro with an Intel Core i7, and Nvidia graphics. I wanted
all the fancy Apple perks before they changed their unibody style and keyboard.

Which operating system and/or application did you use?
Discuss about the CPU(s) and their features

In the beginning it was mostly all Windows. I started programming in DOS and was really familiar with
windows Xp in in College. I was also introduced to Ubuntu at St. Lawrence University and was really
impressed with the open source stuff. After undergrad I made a major conversion to OS X and have been
using it ever since.

Do you have a preference on a CPU type and/or brand? if
yes, which one and why?

I really don't have a preference on a CPU type or brand, but I really like the customer service that comes
with owning a mac. The apple care program and extended warranty really do help me in the long run of
things. All too often have my CPU fail or something terrible happens.

Read \Computing Machinery And Intelligence" By
A.M.Turing and answer the following questions

 How does "The Imitation Game" answer the question "Can machines think? " ?

The Imitation Game is a game where a third party interrogator C must determine the sex of the other two persons A and B. In this case the interrogator must use thoughtful deduction to produce a logical conclusion. The game is played with varying strategy where person A may try and deceive the interrogator or person B may try to aid the interrogator. Turning then proposes that the machine take the place of person A and asks whether the interrogator will decide wrongly as often if the game were played with man or woman. So the question is now can a machine imitate a man or woman and deceive the interrogator and there for think.

Are all digital computers discrete state machines ?
Support your answer with details

Yes, all digital computers are discrete state machines where there is not a defined intermediate state position recognized, as of yet. For now digital computers can be described by discrete states with sudden jumps between them. Many of the continuous systems can also represented as discrete systems.

Consider the "Learning Machines" described in section 7, are there any computing systems today that could learn?

List at least two computing systems and explain why you think they are "Learning Machines".

One computing system and perhaps the most simple and straight forward is decision tree learning. It uses a decision tree as a predictive model to map observations about its environment, represented as branches, to conclusions about the target value represented as leaves. This is similar to the Turing's "learning machines" in that it models that of the child's mind where education and experience dictate its exercise of intelligence. In this case it is more applicable to a large set of input variable and is used for data mining.

Associate rule base learning is another computing system that learns similarly to the the 'learning machines' described by Turing. Associate rule base learning is s rule based learning method for finding connections variables in large databases. Associations are built around interests in regularities in large data sets. The algorithm uses an interest heuristic to create associations with things like point of sales associate where if a person purchases peanut butter they're likely to buy jelly. The system learns of these connections and can predict the outcome of future purchases.

Can machines make mistakes ?

According to Turing, machines cannot and will not make mistakes. He speaks of the nature of the mistake, by first comparing it to the imitation game. Suppose one of the interrogators uses pure arithmetic to sort out whether the the person is in fact a person. The computer then would be forced to mimic a human and make a 'mistake.' But this is a kind of simulation as the computer is intentionally making a mistake and is lying. Turing further defines the question into errors of functioning and errors of conclusion, one being an electrical fault and the other erroneous results.