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CONNECTICUT COLLEGE   **COM110: Quiz1**

For this quiz you will write a response and upload your PDF result. Responses can be handwritten or typed but you will need to make sure to run a pdf conversion on either. Each short response should be a paragraph (3-5 sentences).

circle all answers that apply

[1 5pts] Computer Languages:
   (a) run faster than machine programs
   (b) are hard to understand
   (c) were designed to make programming a computer easier for humans
   (d) have a strict order for which one is better

[2 5pts] Computers are:
   (a) a display, keyboard and mouse that sits on your desk or lap
   (b) your phone that is in your pocket
   (c) your watch that keeps track of your fitness routine and uses GPS
   (d) your car that (supposedly) drives on its own

[3 5pts] In python3, the assignment operator (or "gets") is:
   (a)   gets
   (b)   assignment
   (c)   ==   → equality operator, not assignment
   (d)   =

[4 5pts] In python3 the assignment: x= 10:
   (a)   writes 10 to secondary memory
   (b)   writes 10 to secondary storage
   (c)   read 10 into secondary storage
   (d)   writes 10 into random access memory

[5 5pts] In python3 the variable 10y is valid syntax:
   (a)   sometimes
   (b)   never   → Every identifier must begin with a letter or underscore. NOT number.
   (c)   unless the user specifies
   (d)   always

[6 5pts] In python3 you can create a string variable by:
   (a)   s = str(10)
   (b)   s == str(10)
   (c)   s = '10'
   (d)   s ="10"

[7 5pts] In python3 a bool data type has what values:
   (a)   0
   (b)   1
   (c)   True
   (d)   False

[8 5 pts] An algorithm is:
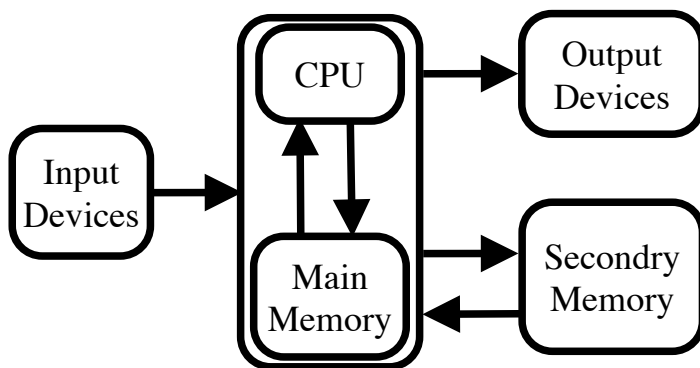   (a)   The thing that makes you more money in youtube
   (b)   The thing that makes news true or not on Twitter/(now called X)   → partial examples for an algorithm.
   (c)   A random way of getting a correct result
   (d)   A step-by-step solution to a problem that can be recreated   → book definition

[9 short response 20 pts] From your reading of the course text assignments, what do you gather is the main purpose of computer science. What is the field and what does it seek to learn/

I believe computer science is a continuous loop aiming to find better and more optimal solutions to daily life problems. We use many computers in our daily lives: our watches, phones, cars, etc. All of these devices are products of computer science. Optimizing them is the purpose of computer science. Computer science can work in various fields: health, biology, physics, software development… In all these fields, computer science eases the workload and supports advancements. In a nutshell, computer science is the fire of our era, which helps humanity in many different aspects and eases our lives.

[10 short response 20 pts] Explain and draw the main parts of our computing model. Detail why each of these parts are needed for general computation.

Input Devices: Devices humans interact with. These are bridges for humans to tell computers what they want. Ex. Keyboard, mouse, controller, etc.

CPU: Is the "brain" of the machine. All the basic operations are completed in this part. Can perform basic arithmetic and logical operations.

Main Memory: Stores programs and data. Accessible by the CPU. This is a temporary storage. Also known as RAM.

Secondary Memory: This is permanent storage for the files and data. It can be an SSD, HDD, etc.

Output Devices: Devices in which the computer interacts with the user and shows the outputs. Ex. Monitor, speaker, etc.

[11 short response 20 pts] Using a written response only, how could you convince a reader that you are a real human instead of a machine? **[bonus 10 pts]** Check your answer with ChatGPT and then discuss how similar or different your approach was from the ChatGPT server response.

If I ever asked to convince someone with a written response that I'm a human rather than a machine, I'd discuss the trolley problem in my text. Even though a machine can come up with specific responses to some variations of this problem, I would be able to look at this problem from a "human perspective." In some instances, in the trolley problem, the end verdict comes up to the "human side" of the decision maker. For example, an elderly person vs. a kid, an ex-criminal (who served his charges) vs. a worker. Moreover, I'd talk about a case where I'm on the railway line, and if I don't pull the lever, I'll die. I'd put thousands of people on the other side of the railway, and as a human, I'd always pull the lever to continue living. I think that an AI -with a robot body- working under the three laws of robotics would protect human beings on the other side at any cost. In the worst case, if there are 1 billion scientists on the other side, the AI will probably choose to sacrifice itself.

When I asked the question prompt to the Chat GPT, it responded that he can make up experiences, show empathy, create ideas, have a sense of humor, have an opinion on certain topics, and engage in an interactive conversation. This response is similar to what I told in my text. It talked about how he will show emotions, make empathy etc.

But, when I asked about the specific problem I mentioned at the end of the paragraph, it gave long responses about it and end up in a blury conclusion rather than saving itself directly. It talked about the mixed ethical perspective of this problem and made an assessment from different points of view (utilitarianism, deontology, etc.). I think that a machine can be distinguished with this approach because a human will probably have one point of view and give a direct response.

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