ARTIFICIAL INTELLEGENCE

الاسم

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سيكشن

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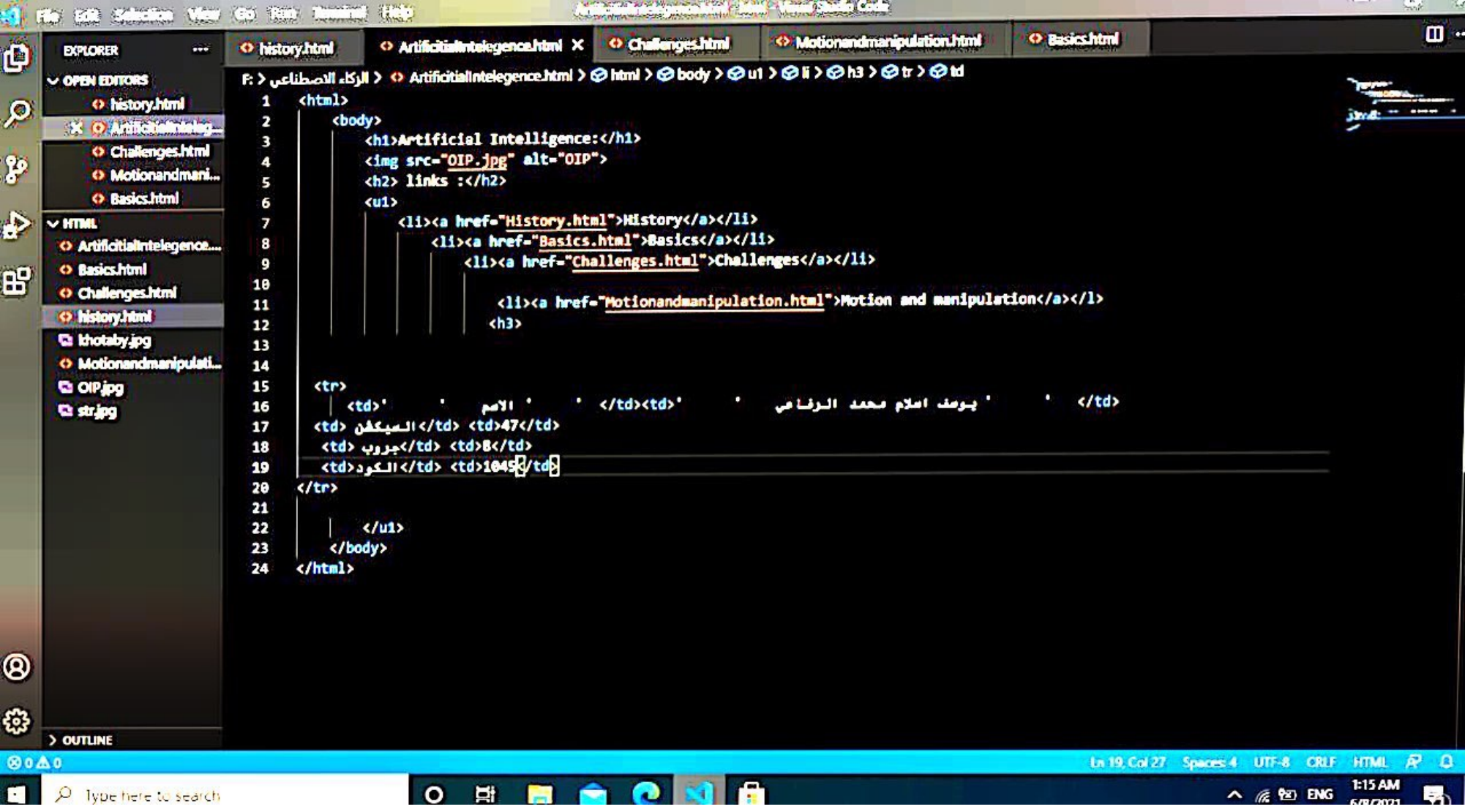

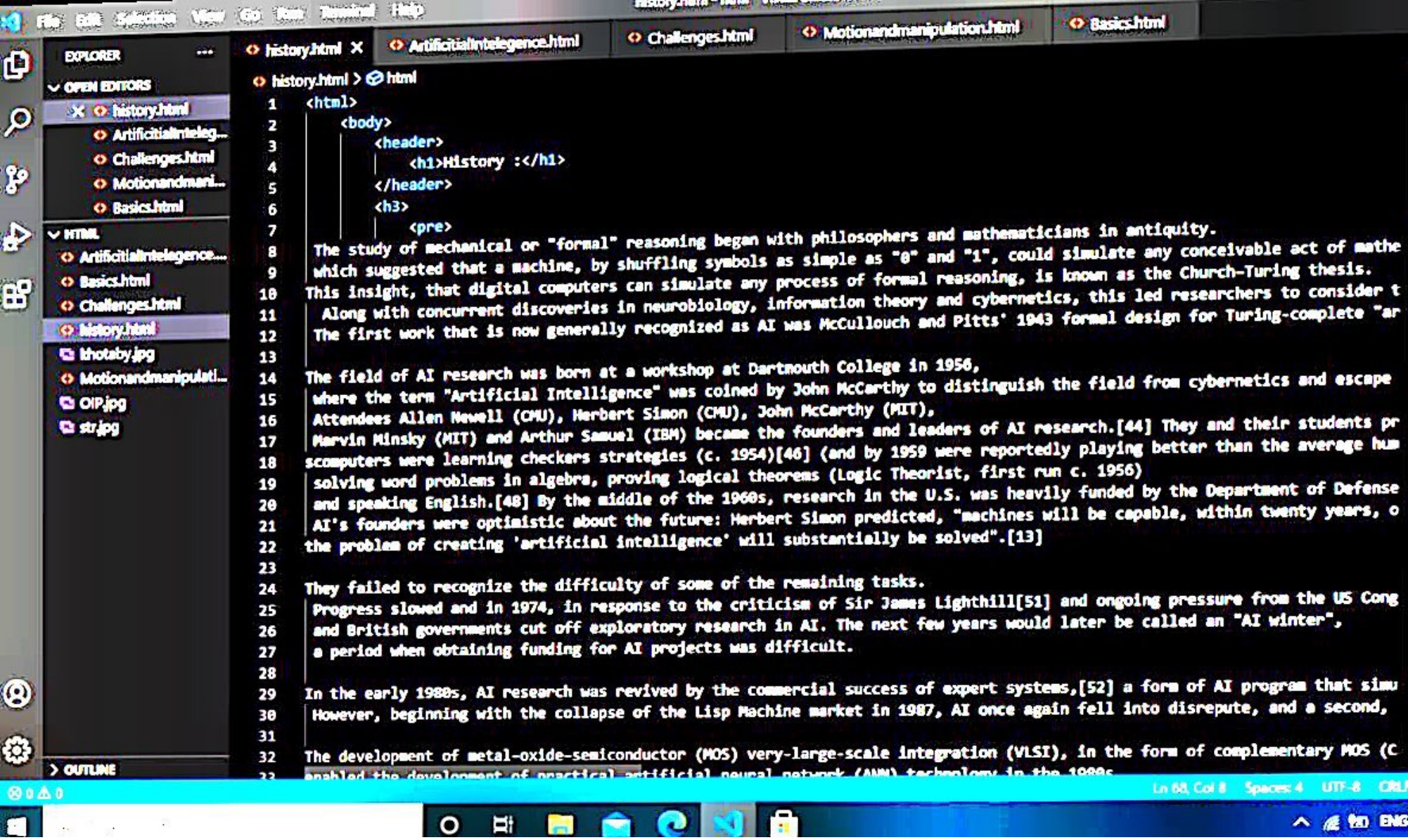

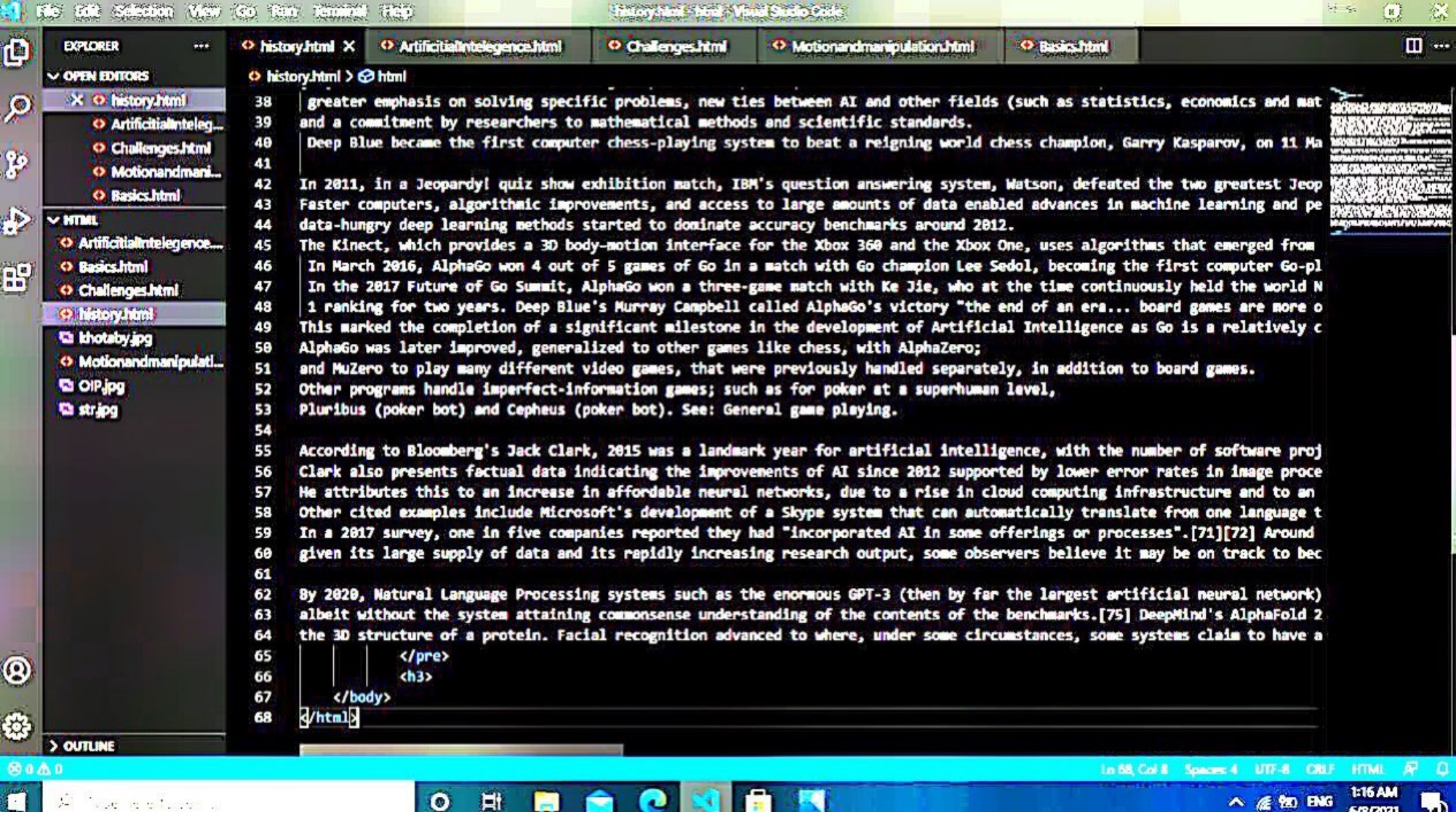

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            <h1>Basics:</h1>
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Computer science defines AI research as the study of "intelligent agents":
 any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals.
 A more elaborate definition characterizes AI as "a system's ability to correctly interpret external data.
  to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation.


A typical AI analyzes its environment and takes actions that maximize its chance of success.
An AI's intended utility function (or goal) can be simple ("1 if the AI wins a game of Go, 0 otherwise")
 or complex ("Perform actions mathematically similar to ones that succeeded in the past").
Goals can be explicitly defined or induced. If the AI is programmed for "reinforcement learning",
goals can be implicitly induced by rewarding some types of behavior or punishing others.
Alternatively, an evolutionary system can induce goals by using a "fitness function"
to mutate and preferentially replicate high-scoring AI systems,
similar to how animals evolved to innately desire certain goals such as finding food.
Some AI systems, such as nearest-neighbor, instead of reason by analogy, these systems are not generally given goals,
except to the degree that goals are implicit in their training data.
Such systems can still be benchmarked if the non-goal system is framed as a system whose "goal"

is to accomplish its narrow classification task.

AI often revolves around the use of algorithms. An algorithm is a set of unambiguous instructions that a mechanical compute
A complex algorithm is often built on top of other, simpler, algorithms.
 A simple example of an algorithm is the following (optimal for first player) recipe for play at tic-tac-toe

If someone has a "threat" (that is, two in a row), take the remaining square. Otherwise,
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