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### **Excercise-2.1**

The four approaches to AI as discussed in the class as well as according to Russell and Norvig are:

**1.) Acting humanly: The Turing Test approach:** This method involves the **Turing Test**, proposed by Alan Turing (Turing, 1950) to test the intelligent behavior as the ability to achieve human-level performance in all cognitive tasks, sufficient to fool an interrogator. The test he proposed is that the computer should be interrogated by a human via a teletype, and passes the test if the interrogator cannot tell if there is a computer or a human at the other end.

**2.) Thinking humanly: The cognitive modelling approach:** In this approach we try to involve the interdisciplinary field of **cognitive science**, in order to understand the working of human behaviour and then design algorithms which achieve goals in a similar way.

**3.) Thinking rationally: The laws of thought approach:** This approach specifies algorithms for computers to be designed in a way that a given problem is first treated as logical statement and the solve it using traditional logical syllogisms and operations.

**4.) Acting rationally: The rational agent approach:** Acting rationally approach talks about giving computers the ability to take decisons based on given beliefs. In this approach, AI is viewed as the study and construction of rational agents.