In this work we study the ways of implementing articial intelligence for modern card games. We strive to create various players, to put them into matches against each other. By doing so we can verify the efficiency of employed methods, such as simulation, random approach, opponent modeling, xed strategy, etc. We would also like to nd out what influence do other game elements have on the progress of the game and the performance of individual players. The game used in the thesis is based on Magic: The Gathering's rules for two players, specically on Magic 2010 Core Set, which revised certain parts of the game. These rules are then modied or simple ed when necessary for implementing game mechanics on a computer. Decks of cards used in testing are based on the existing ones.