

Question 1

For each of the following simplified scenarios, determine if it comprises a combinatorial optimization problem and if so whether a KR-based approach like Answer Set Programming (ASP) may in principle be suitable. There maybe multiple interpretations and multiple correct answers. See this as a prompt for discussion with your tutor.

1.1 Building a mobile app that can play chess against the user.

1.2 A new start-up offers chess clubs a software product that can propose a rotation of regular Sunday matches between the club members and automatically email the participants reminders when they have a match the next day.

1.3 A Sydney non-profit wants to collect fresh produce discarded by supermarkets and redistribute them to local charity groups in differnt suburbs. The non-profit only has a single truck but a lot of good will.

1.4 A political party wants to improve its image in view of the next election. Its strategy it to carefully write the next public speech so that the audience is thrilled and votes for it.

1.5 A car manufacturing company wants to improve the energy-efficiency of the next vehicle it designs. This involves adjusting the shape of the car body so as to minimize air friction.

