Exercise 1

Total: 100 pts

1. Study simulated annealing (SA) from the literature on the WWW/articles. The simulated annealing method resembles the cooling process of molten metals through annealing and used for solving optimization problems. Write a short overview of the method and the algorithm. [20]
2. Code SA algorithm in the language of your choice and find the optimal solution to the following problem

$$Minimize\ f(x_1, x_2) = (x_1^2 + x_2 - 11)^2 + (x_2^2 + x_1 - 7)^2$$
$$0 \leq x_1, x_2 \leq 5$$

Choose the initial point as $(2.5,2.5)^T$ and termination factor = 0.001. [80]