Implement a binary-coded GA to minimize $f(x_1,x_2)=x_1+x_2-2x_1^2-x_2^2+x_1x_2$, in the range of $1.0 \leq x_1,x_2 \leq 5.0$.

Use a random population of size $N=10$, tournament selection, a single-point crossover with probability pc=0.8 and bit-wise mutation with probability pm = 0.06.

Assume 8 bits of each variable and thus, the GA-string will be 16-bits long.

Run your implementation for 50 iterations.

Submit your source code and your results (after 50 iterations) by 8,15, 1st of February. The submission should be done by email with a subject 'TIES451_exercise1_yoursurname' to yue.y.zhou-kangas@jyu.fi