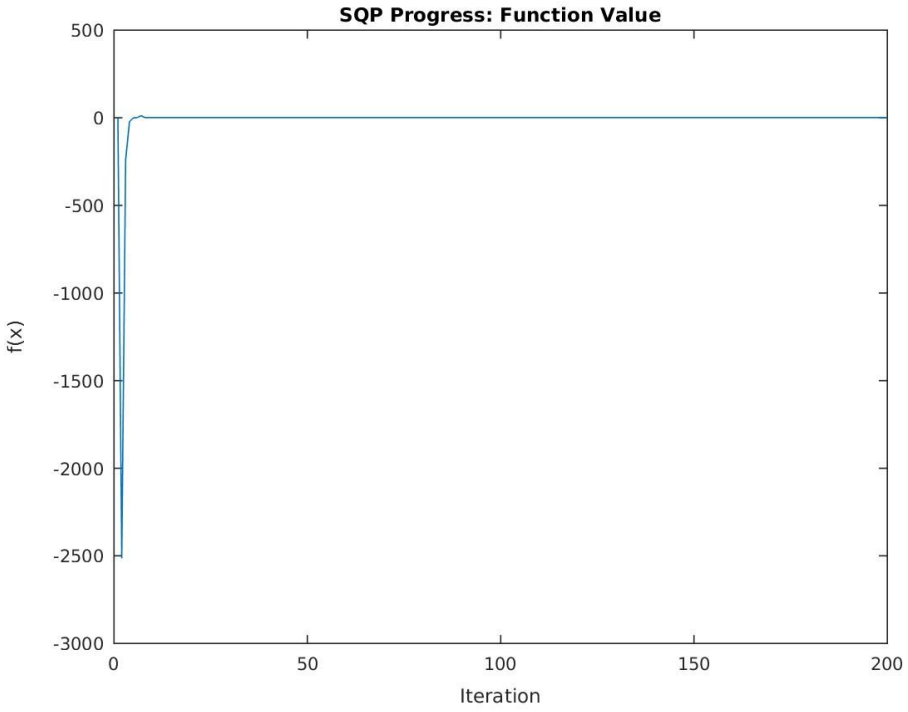
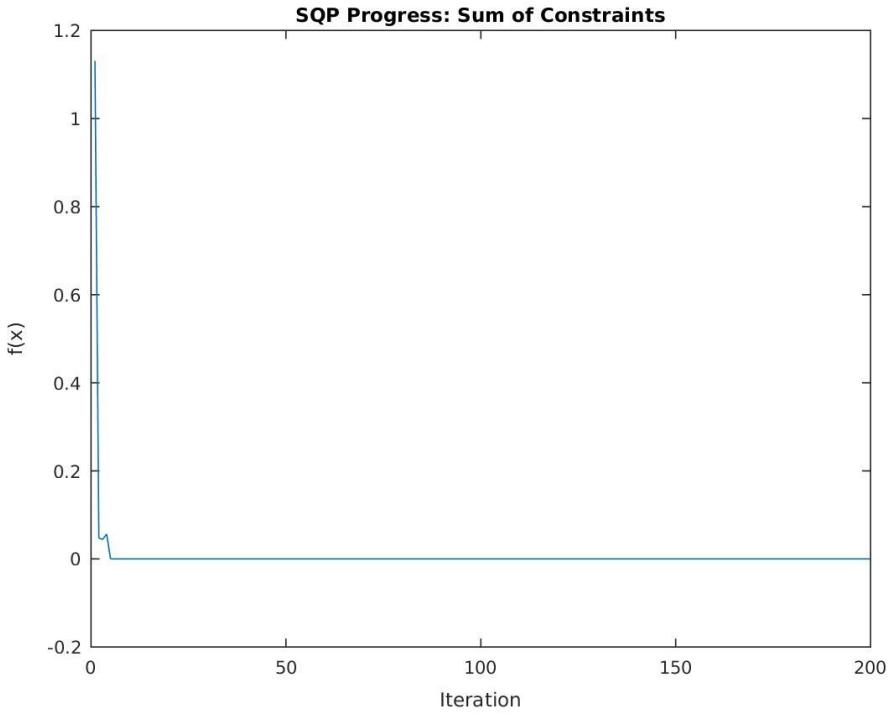
**Analysis:**

- Sequential Quadratic Programming is initialized with vector [-1.8, 1.7, 1.9, -0.8 -0.8]
- The method converges to [-1.7171  1.5957  1.8272  -0.7636  -0.7636] and all the constraints to zero.
- The Lagrange Multipliers reach convergent value of [-0.0402 0.0380 -0.0052]
- Convergence of SQP is negatively affected if the initialization of lagrange multipliers is set to all 0s. It converges to [-2.2692  2.2025  0  -0.0000  -0.0000] in the specific case.

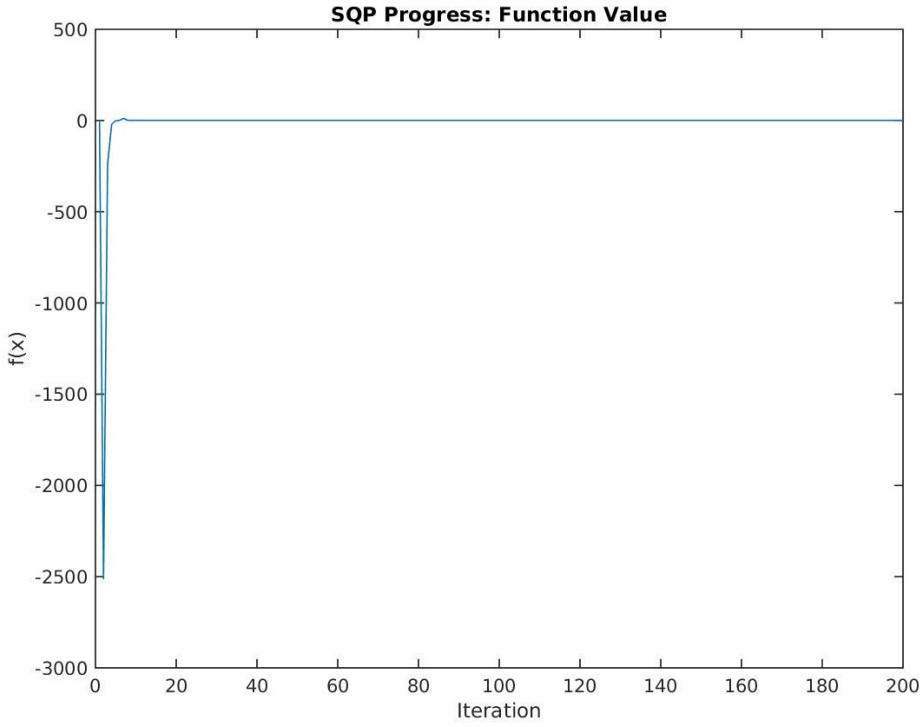
**Plots:**

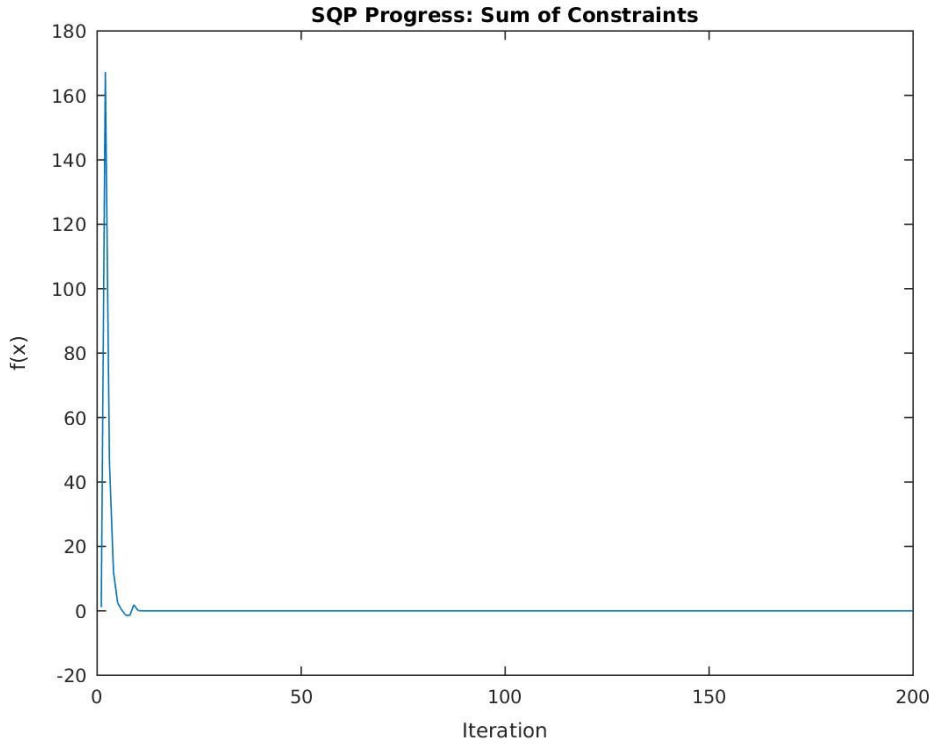
Case 1: Lagrange Multipliers= [1 1 1]



Case 2: Lagrange Multipliers=[0 0 0]



**Code:**

hw9func.m - Contains the code for function , gradient, Hessian of L, Equality constraints, equality constraints derivatives.

main.m  - Main entry point

sqp.m - Sequential Quadratic Programming Method For Equality Constraints