

```
2 double computeH1seminormLinearFE(const If::assemble::DofHandler &dofh,
3                                   const Eigen::VectorXd &mu) {
4     // calculate stiffness matrix by using the already existing local assembler
5     // LinearFELaplaceElementMatrix
6     double result = 0.0;
7     int N_dofs = dofh.NumDofs();
8     If::assemble::COOMatrix<double> stiffness_matrix(N_dofs, N_dofs);
9     If::uscalfe::LinearFELaplaceElementMatrix my_mat_provider{};
10    If::assemble::AssembleMatrixLocally(0, dofh, dofh, my_mat_provider,
11                                         stiffness_matrix);
12    const Eigen::SparseMatrix<double> stiffness_mat =
13        stiffness_matrix.makeSparse();
14    result = std::sqrt(mu.dot(stiffness_mat * mu));
15    return result;
16 }
```