

C++ code 2.14.25: Sub-problem (2-14.v): Implementation of `solveCRDirichletBVP()`

→ [GitLab](#)

```
2 // Obtain an array of boundary flags for edges (codim-1 entities !)  
3 If::mesh::utils::CodimMeshDataSet<bool> boundary_edges{  
4     If::mesh::utils::flagEntitiesOnBoundary(fe_space->Mesh(), 1)};  
5 // Enforce homogeneous boundary  
6 If::assemble::FixFlaggedSolutionComponents<double>(  
7     [&boundary_edges, &dof_handler](  
8         If::assemble::glb_idx_t gdof_idx) -> std::pair<bool, double> {  
9         const If::mesh::Entity &edge{dof_handler.Entity(gdof_idx)};  
10        return {boundary_edges(edge), 0.0};  
11    },  
12    A, phi);  
13 // Set up Galerkin matrix in CRS format  
14 Eigen::SparseMatrix<double> A_crs = A.makeSparse();  
15 // ... and solve the linear system of equations by Gaussian elimination  
16 Eigen::SparseLU<Eigen::SparseMatrix<double>> solver;  
17 solver.compute(A_crs);  
18 sol = solver.solve(phi);
```