C++ code 9.2.10: Sub-problem (9-2.f): class LinearMassEdgeMatrixProvider ⇝ GitLab

```cpp
template <typename FUNCTOR>
Eigen::Matrix<double, 2, 2> LinearMassEdgeMatrixProvider<FUNCTOR>::Eval(
    const lf::mesh::Entity &edge) {
  Eigen::Matrix<double, 2, 2> elBdyEdgeMat;
  // Throw error in case not edge entity
  LF_VERIFY_MSG(edge.RefEl() == lf::base::RefEl::kSegment(),
                "Unsupported entity type " << edge.RefEl());
  if (predicate_(edge)) {
    // Obtain endpoints of the edge
    auto endpoints = lf::geometry::Corners(*(edge.Geometry()));
    LF_ASSERT_MSG(endpoints.cols() == 2, "Wrong no endpoints in " << edge);
    // Compute length of the edge
    double edge_length = (endpoints.col(1) - endpoints.col(0)).norm();
    // Compute the local edge mass element matrix
    // clang-format off
    elBdyEdgeMat << 1.0 / 3.0, 1.0 / 6.0,
                    1.0 / 6.0, 1.0 / 3.0;
    // clang-format on
    elBdyEdgeMat *= edge_length * cool_coeff_;

    return elBdyEdgeMat;  // return the local edge mass element matrix
  }
  return (Eigen::Matrix<double, 2, 2>::Zero());
}  // LinearMassEdgeMatrixProvider<FUNCTOR>::Eval
```