This describes an add-on to Project 1. We expect that Project 1 has already progressed. This add-on is also intended to check the extendibility of your code, i.e. can the present code be extended to also solve these additional tasks or are there parts of the code, which have to be rewritten? Identify the parts which have to be rewritten and be prepared to discuss this issue in the final presentation.

This assignment has 4 tasks.

**Task 1**

Extend your spline code so that a spline can be either defined by grid and de Boor points or by grid and interpolation points.

**Task 2**

Write a method which sums up two splines

**Task 3**

Write a test which checks $\sum_{i=0}^{L} N_i(u) = 1$ for any $u$ in the interval $[u_2, u_{K-2}]$.

**Task 4**

Consider Slide 4 and in particular the last remark concerning $u_{-1}$. Can you verify this practically using your code? Write a unittest for this.

Lycka till!