Here are the questions from [4.4 The Kalman Filter and LMMSE estimators - Quiz]

1. Fact:
For linear state space models with additive noise, the Kalman filter computes the LMMSE estimate recursively, also when the noise is not Gaussian.

Statement for you to verify or reject:
However, the Kalman filter is merely the best linear estimator

Optional Answers:

1. true
2. false

2. What is different in LMMSE estimation compared to MMSE estimation. (Mark the incorrect statement)

Optional Answers:

1. In LMMSE the noise cannot be Gaussian.
2. In LMMSE estimation we restrict the estimator to be a linear (or at least affine) function of data (measurements).
3. In MMSE estimation we normally compute a posterior distribution conditioned on data.

Thank You