Platform Based Design (Undergraduate: 1, 2 and 4, Graduates: 1 - 5): AUTOSAR has proved to be a very successful implementation of Platform Based Design (PBD) in the automotive industry. The standards are described here (see Basics and Technical Overview links on the left). You can also reference /reading/QuoVadisFinal.pdf on bCourses for more information.

1. Define the goals and motivation behind AUTOSAR.


3. On the AUTOSAR website, you can find a graphical representation of the standard (here), which illustrates the AUTOSAR layers (AUTOSAR software, middleware and basic software). Each layer is characterized by specific functionalities, represented as blocks.
   a. Give a general description of each block and layer (e.g. what is the RTE, what the Basic Software etc.?).
   b. Describe the various interfaces between each layer.

4. In AUTOSAR, a functionality or behavior is described as the result of the interaction of a number of software components. Depending on system constraints, components are mapped to specific hardware in several design iterations. This link describes the AUTOSAR methodology and flow.
   a. Describe the models necessary at the beginning or start of the methodology.
   b. Provide a description of the workflow of the AUTOSAR methodology.

5. AUTOSAR and Platform Based Design
   a. Where are the key concepts of PBD in AUTOSAR?
   b. Describe the flow you analyzed in Q4 in terms of PBD iterations (you may need more than one).