IL2212 EMBEDDED SOFTWARE

Reflection Assignment 2

Student name

February 12, 2019

The reflection assignment shall train the students for the 'open' questions, but also improve the writing skills of the students. The participation in the reflection exercises is ***mandatory****. Answer the questions* ***individually*** *in electronic form (about 3-4 pages). Be also careful about the quality of your writing.*

NOTE: There is not a single correct answer, in fact for many of these question there exist even multiple different opinions in industry and the research community. It is important that you start to think about the problems in order get a better understanding of the problems related to area of embedded software development. *Please, revisit the slides of the corresponing lectures before answering the question!*

Print your document *five* times and bring the printed copies to the seminar!

Deadline for submission of answers: Wednesday, February 20, 2019.

1 Part A - Models and Design Languages

1.1 What do you view as the largest benefits of the theory on models of computation? How does this theory relate to the classical real-time theory (based on periodic tasks)?

1.2 Will we see different programming or modelling languages as future design languages for embedded systems? What is required from such a language?

2 Part B - Design Methodologies

2.1 Do you think a correct-by-construction design flow for real-time systems is feasible? What is required for such a flow? What are the largest challenges?

2.2 Applications in many industrial domains tend to be very large and distributed in nature (i.e. automotive, avionics, industrial automation). What do you view as the most important design aspects that would allow/support short development cycles at manageable costs (design, testing, validation)?