Table1 Pre-lab Questionnaire

|  |  |
| --- | --- |
| Pre-lab questionnaire for adsRUCM | Pre-lab questionnaire for RUCM |
| 1.I have received extensive training on use case modeling  □Completely agree □Generally agree □Generally disagree □Completely disagree | 1.I have received extensive training on use case modeling  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 2. I have substantial experience with use case modeling  □Completely agree □Generally agree □Generally disagree □Completely disagree | 2. I have substantial experience with use case modeling  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 3. I fully understand the autonomous driving concepts introduced in adsRUCM  □Completely agree □Generally agree □Generally disagree □Completely disagree | 3. I fully understand the autonomous driving concepts introduced in adsRUCM  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 4. I am confident I can accurately apply adsRUCM  □Completely agree □Generally agree □Generally disagree □Completely disagree | 4. I am confident I can accurately apply RUCM  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 5. I am confident I can accurately apply the ADS elements in tool  □Completely agree □Generally agree □Generally disagree □Completely disagree |  |
| 6. You will be asked to do use case modeling with adsRUCM. The task should take approximately 2 hours in the scheduled laboratories. Whether you volunteer or not, you must perform the laboratory work as it is part of the course curriculum. Volunteering means that you allow us to use your results to achieve a better understanding of the benefit of using RUCM and adsRUCM. We would like to mention that this study conforms to common practices of ethics in conducting research in Empirical Software Engineering. The instructors of the course will not know about your decision to volunteer or not volunteer in terms of using your results. We would really appreciate if you can volunteer!  □I volunteer to participate □I don't want to participate | 5. You will be asked to do use case modeling with RUCM. The task should take approximately 2 hours in the scheduled laboratories. Whether you volunteer or not, you must perform the laboratory work as it is part of the course curriculum. Volunteering means that you allow us to use your results to achieve a better understanding of the benefit of using RUCM and adsRUCM. We would like to mention that this study conforms to common practices of ethics in conducting research in Empirical Software Engineering. The instructors of the course will not know about your decision to volunteer or not volunteer in terms of using your results. We would really appreciate if you can volunteer!  □I volunteer to participate □I don't want to participate |

Table2 Post-lab Questionnaire

|  |  |
| --- | --- |
| Post-lab questionnaire for adsRUCM | Post-lab questionnaire for RUCM |
| 1. The instructions and objectives of the lab were perfectly clear to me  □Completely agree □Generally agree □Generally disagree □Completely disagree | 1. The instructions and objectives of the lab were perfectly clear to me  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 2. I fully understood the autonomous driving scenario I was provided.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 2. I fully understood the autonomous driving scenario I was provided.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 3. I was entirely comfortable when applying the use case template.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 3. I was entirely comfortable when applying the use case template.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 4. I was entirely comfortable when using the adsRUCM editor.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 4. I was entirely comfortable when using the RUCM editor.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 5. I was entirely comfortable when using the newly introduced ADS elements.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 5. I gained valuable experience by applying the RUCM editor and in the future, I will be in a better position to perform such tasks.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 6. I gained valuable experience by applying the ADS elements and in the future, I will be in a better position to perform such tasks.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 6. Did you have enough time to finish the task?  □Yes □No |
| 7. Did you have enough time to finish the task?  □Yes □No | 7. I spent too much time on understanding the case study scenario.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 8. I spent too much time on understanding the case study scenario.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 8. I spent too much time on figuring out how to use the tool.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 9. I spent too much time on figuring out how to use the tool.  □Completely agree □Generally agree □Generally disagree □Completely disagree | 9. I spent too much time on understanding the use case template.  □Completely agree □Generally agree □Generally disagree □Completely disagree |
| 10. I spent too much time on understanding the use case template.  □Completely agree □Generally agree □Generally disagree □Completely disagree |  |
| 11. I spent too much time on understanding the ADS concepts  □Completely agree □Generally agree □Generally disagree □Completely disagree |  |

Table3 Comprehension Questionnaire for adsRUCM

|  |  |  |  |
| --- | --- | --- | --- |
| Comprehension Questionnaire for adsRUCM | | | |
|  | I understood the concept and was able to properly apply it. | Do you feel the concept makes your requirement specification more convenient？ | Does the design of editor convenient for you to use this concept? |
| |  | | --- | | Natural Environment | | Y/N | Y/N | Y/N |
| Road | Y/N | Y/N | Y/N |
| Animal | Y/N | Y/N | Y/N |
| OtherObstacle | Y/N | Y/N | Y/N |
| RoadHumanUser | Y/N | Y/N | Y/N |
| Pedestrian | Y/N | Y/N | Y/N |
| TrafficControlPerson | Y/N | Y/N | Y/N |
| AnimalRider | Y/N | Y/N | Y/N |
| VehicleUser | Y/N | Y/N | Y/N |
| Driver | Y/N | Y/N | Y/N |
| Occupant | Y/N | Y/N | Y/N |
| Vehicle | Y/N | Y/N | Y/N |
| RailedVehicle | Y/N | Y/N | Y/N |
| OffRoadVehicle | Y/N | Y/N | Y/N |
| RoadVehicle | Y/N | Y/N | Y/N |
| Exposure | Y/N | Y/N | Y/N |
| RiskCategory | Y/N | Y/N | Y/N |
| DemandLevel | Y/N | Y/N | Y/N |