IoT Course

Capstone Project   
Evaluation Sheet

For instructors & evaluation panels (printing-out purpose)

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1. Capstone Project Score

| COURSE | | IoT Course | EVALUATOR | Name & Signature | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PROJECT TITLE | | **Thiết kế hệ thống quản lý và điều khiển thiết bị sử dụng trợ lý giọng nói dùng ESP32-S3 và Home Assistant** | TEAM NAME | **Nhóm 9** | | | | | |
| SECTION | CRITERIA | | | | SCORE | | | | |
| IDEA  (10 POINTS) | Creativity and novelty | | | | ① | ② | ③ | ④ | ⑤ |
| Differentiation from the existing known cases | | | | ① | ② | ③ | ④ | ⑤ |
| Impact on the public interest | | | | ① | ② | ③ | ④ | ⑤ |
| Project topics that may be in demand in the real field | | | | ① | ② | ③ | ④ | ⑤ |
| SUBTOTAL | | | | PTS ⋅ 1/2 = PTS | | | | |
| APPLICATION  (30 POINTS) | Maintenance and sustainable development | | | | ① | ② | ③ | ④ | ⑤ |
| Proper tool usage base on each condition | | | | ① | ② | ③ | ④ | ⑤ |
| Proper utilization of methods learned in the class | | | | ① | ② | ③ | ④ | ⑤ |
| Utilization of tools and solutions based on own research | | | | ① | ② | ③ | ④ | ⑤ |
| SUBTOTAL | | | | PTS ⋅ 3/2 = PTS | | | | |
| RESULT  (30 POINTS) | Performance | | | | ① | ② | ③ | ④ | ⑤ |
| Practicality | | | | ① | ② | ③ | ④ | ⑤ |
| Visualization of result and data flow | | | | ① | ② | ③ | ④ | ⑤ |
| Maturity level as a SW | | | | ① | ② | ③ | ④ | ⑤ |
| SUBTOTAL | | | | PTS ⋅ 3/2 = PTS | | | | |
| PROJECT  MANAGEMENT  (10 POINTS) | Evenly shared workload by all team members | | | | ① | ② | ③ | ④ | ⑤ |
| Fluid communication among the team members and demonstrated good teamwork | | | | ① | ② | ③ | ④ | ⑤ |
| Ability to adapt to unexpected issues and challenges | | | | ① | ② | ③ | ④ | ⑤ |
| Reached the desired milestones in a timely manner (according to the WBS form) | | | | ① | ② | ③ | ④ | ⑤ |
| SUBTOTAL | | | | PTS ⋅ 1/2 = PTS | | | | |
| PRESENTATION & REPORT  (20 POINTS) | The report was well-written and clearly conveyed the main points. | | | | ① | ② | ③ | ④ | ⑤ |
| Slides and supporting material were well prepared. | | | | ① | ② | ③ | ④ | ⑤ |
| The presentation was fluid and successfully communicated the main results. | | | | ① | ② | ③ | ④ | ⑤ |
| The speaker was able to answer the questions that were raised. | | | | ① | ② | ③ | ④ | ⑤ |
| SUBTOTAL | | | | PTS | | | | |
| EVALUATOR COMMENT | | | | | | | | | |
|  | | | | | | | | | |

2. Capstone Project Technology Readiness Level Assessment

| TECH.  READINESS LEVEL | CRITERIA | LEVEL |
| --- | --- | --- |
| 1 | **Project initiation**   * Project owner identified. * Project principles and high-level objectives defined. * Use case definitions (including target users and activities). |  |
| 2 | **Conceptualization**   * Development has begun. * Basic individual algorithms or functions are prototyped and documented. * Results are speculative, and there is no proof or detailed analysis to support assumptions or expectations. |
| 3 | **Proof of concept implementation**   * Active research, development, and documentation are initiated. * Implementations of key functions. * Validation of critical concepts. |
| 4 | **Prototype component**   * Validation of prototype components. * PoC has become a prototype component. * System technology selection has been made. |
| 5 | **Prototype integration**   * All components are integrated with reasonably realistic supporting elements so that the software can be tested and completely validated in a simulated environment. * In a restricted environment with a small number of real users. * Data formats specified. |
| 6 | **Pilot-scale prototype to real-world integration**   * Represents a step up from the lab scale to the engineering scale. * Tested in a real-world environment with a small number of real users. * Requires initial System & User documentation |
| 7 | **Operational integration**   * Requires the demonstration of an actual system prototype in an operational environment. * Verification and validation are completed, and the validity of the solution is confirmed within an intended application. * Engineering support and maintenance organization, including helpdesk, are in place. |
| 8 | **Deployment**   * Demonstrated to work in its final form and under expected conditions. * In most cases, this TRL represents the end of system development. * Full documentation should be provided (including specifications, design definition and justification, verification and validation (qualification file), users and installation manuals, training and education materials, software problem reports, and non-compliances). |
| 9 | **Production**   * Represents actual application in its final form and under designed conditions. * In almost all cases, this is the end of the last “bug fixing” aspects of the system development. |