**Guide2. APT Project Development**

**Capstone Subject**

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| **1. APT Project progress summary** |
| Below, you will find different fields that you must complete with the requested information.. |

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| APT project progress summary | So far, the project has made significant progress. We already have the administrative web page connected to the database, which allows creating, modifying and deleting events. Additionally, users can be managed, and the administrator has access to an information panel. On the other hand, the mobile application now allows you to register both students and guests, who can register or cancel their participation in the events. If an event does not have seats available, users can opt for a waiting list. Attendance validation is carried out by an event manager, who scans the QR code of the student or guest to confirm their attendance and assign them points. |
| Objetivos | Several important adjustments were made to the project. Two new types of users were added to the mobile application: one who will be able to manage events from a mobile device and another who will be a seller. The latter will allow users to redeem their accumulated points at specific points within Duoc UC. Waitlisting for full events was also implemented, and a statistical dashboard was added to the website so administrators can view key metrics about events and participation. |
| Metodología | The methodology that we continue to use is Scrum, since it has given us very good results. It has been effective in complying with what was planned, in addition to being quite organized and flexible in the face of changes that arise during the development of the project. |
| Evidence of progress | The evidence of progress that I will present in this report includes the implementation of the administrative website connected to the database and the functional mobile application. The website allows the creation, modification and deletion of events, user management, and offers a statistical panel for administrators. The mobile application, for its part, now allows you to register both students and guests, with options to register or cancel your participation in events, as well as enter a waiting list when events are full. In addition, attendance validation has been implemented by scanning QR codes, and the accumulation of points that users can exchange for rewards.  This evidence allows us to demonstrate the development of the project by showing key functionalities that are already operational, such as event and user management, the interaction between the mobile application and the web, and the integration of a points-based incentive system.  To safeguard the quality of the project, we have followed the good practices of our discipline. We correctly implemented the Scrum methodology, which has facilitated an agile organization that is adaptable to changes. We use tools such as Visual Studio, Ionic, Java, Python and Bootstrap, making sure to follow web and mobile development standards. As for the database, we opted for Firestore, a NoSQL system that efficiently supports the project's functionalities. These technical and methodological choices guarantee the robustness and scalability of the platform. |
| **2.**  **Work Plan Monitoring** | Carefully examine your work plan, focusing especially on the progress status and adjustments column. |

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| Plan de Trabajo | | | | | | | |
| Competencia o unidades de competencias | Actividades | Recursos | Duración de la actividad | Responsable# | Observaciones | Estado de avance | Ajustes |
| *Desarrollo web* | *Desarrollo de página web administrativa* | *Visual Studio, Bootstrap, Firebase, Firestore* | *10 semenas* | *Fabián y Yordano* | *La página web permitirá crear, modificar y eliminar eventos, además de ofrecer un panel de información para administradores.* | *En curso* | *Se añadió un panel estadístico y nuevos tipos de usuarios (gestor de eventos, vendedor).* |
| *Desarrollo móvil* | *Desarrollo de la aplicación móvil para inscripción de eventos* | *Ionic, Angular, Firebase, Firestore, QR Code Scanner* | *10 semanas* | *Ronald y Javier* | *La aplicación móvil permite registrar usuarios, inscribirse en eventos y validación mediante QR.* | *En curso* | *Se implementó la lista de espera y se ajustó la validación mediante código QR.* |
| *Base de datos* | *Desarrollo de base de datos que conecta web y app móvil* | *Firebase Firestore, reglas de seguridad, autenticación de Firebase* | *2 semanas* | *Todo el equipo* | *La base de datos conecta ambas plataformas (web y móvil) y actualiza la información en tiempo real.* | *En curso* | *Ajustes en las reglas de seguridad para optimizar el acceso y la sincronización.* |
| *Habilidad comunicativa* | *Coordinación y reuniones del equipo* | *WhatsApp, Discord* | *Continuo* | |  | | --- | |  |  |  | | --- | | *Todo el equipo* | | *Comunicación fluida y constante, retroalimentación semanal para asegurar el cumplimiento de metas.* | *En curso* | *Mejorar el seguimiento de tareas por WhatsApp para optimizar la planificación.* |
| *Gestión de proyecto ágil* | *Aplicación de la metodología Scrum* | *Trello, Notion, sprints, daily meetings* | *Continuo* | |  | | --- | |  |  |  | | --- | | *Todo el equipo* | | *Seguimiento del proyecto mediante la metodología Scrum, adaptable a los cambios y necesidades del proyecto.* | *En curso* | *Se ajustaron tiempos de sprint debido a la integración de nuevas funcionalidades.* |

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| **3. Adjustments from monitoring** |
| Delve into the observations of your work plan. Analyzes the planned activities and indicates which aspects facilitated or hindered the execution of the plan. State how you addressed and/or will address the obstacles. Finally, point out the adjustments you made to the work plan based on this analysis. |

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| **Factors that have facilitated and/or hindered the development of my work plan:**  **Facilitators:**  ● Scrum Methodology: It has allowed us to have an agile and organized process. Regular follow-up meetings have helped us maintain constant and fluid communication between team members, which has facilitated early identification of problems and quick decision-making.  ● Technological resources: The use of tools such as Ionic, Firebase and Firestore has been key to the technical progress of the project. These technologies offer the flexibility and scalability that we need to develop both the mobile application and the administrative website efficiently.  ● Collaboration and teamwork: The team has worked collaboratively, supporting each other in solving technical problems and optimizing the development process. The division of tasks between web development, mobile development and database has allowed progress to be made simultaneously on different fronts.  **Difficulties:**   * Database integration with mobile app: Synchronizing the web and mobile systems has presented some challenges, especially in terms of validating real-time events and correctly assigning points. To address this difficulty, we have decided to perform regular integration tests to identify and fix errors early. * Complexity in user management: The implementation of different types of users (students, guests, managers and sellers) has generated complications in security rules and access to different functionalities. To solve this, it was decided to refine the structure of the database and adjust the security policies in Firestore for more efficient management of user roles. |

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| Activities adjusted or eliminated:  Adjustments to event validation: Due to the challenges encountered in the integration between the mobile application and the database, we adjusted the event validation system. QR code scanning functionality has been simplified so managers can validate attendance more quickly and avoid synchronization issues. This adjustment allowed the validation process to run more smoothly.  Incorporation of the waiting list: Originally, the waiting list was not contemplated in the initial planning, but due to the high demand for events and to improve the user experience, we decided to include this functionality in the mobile application. This has been an important adjustment that responds to the real needs of users.  Statistical Dashboard: A statistical dashboard has been added to the administrative web page to allow administrators to view key metrics, such as the number of registered users, events created, and participation in each. This adjustment was necessary to provide greater control and visibility into the status of events. |