

# Blended Mobility Project, 13<sup>th</sup> Edition 2022: Digital Marketing Platform for Real Estate Projects and a Mobile Application for Restaurant Reservations

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Blended Mobility Project methodology is devoted to create and manage international multidisciplinary teams of students who will collaborate in order to develop a solution for an engineering problem. These teams are set up for a semester with the purpose of developing and presenting a prototype or a proof of concept for a given challenge.

Blended Mobility Project in the academic year 2022/23, completed its 13th edition which started in the academic year 2009/10. Altogether HIEs from 10 countries were participating including Portugal, Belgium, Germany, the UK, Greece, Italy, Kurdistan - Iraq, Slovenia, France and Lithuania. Information Technology companies provide real project proposals. With this professional involvement, students got a context which is international, multicultural, multidisciplinary and professional.

The preparation of the course starts at the beginning of the first semester in October. At this stage the teachers collect challenges from companies and

select the most interesting with regards to its pedagogical potential. Initially 6 projects were selected. The selected challenges are presented to final-year-undergraduate or master students. Each project is implemented by a team of about 10 students which are mainly from Information Technology and Software Engineering disciplines but students from other fields of study, such as: Business Development, Management, Electronics, IT & Design participate. Applicants are selected based on a set of criteria defined by each partner university and the teams for each challenge are setup. In 2022/23 edition, 52 students were involved actively, as well as 17 teachers from the 12 participating HEIs. Allocating 10-11 students per team 5 projects were chosen to be implemented. This process was concluded by the end of January and the first face-to-face meeting that runs at the beginning of the second semester, took place at Orleans, France, 13-17 February, 2023. At this first face-to-face meeting, students get to know each other, the company offering the challenge and its details. The challenge is provided to the students by the company but no specifications are given concerning the solution to develop; that is the students task. Students have to interact and cooperate during the semester in order to agree on the necessary specifications and on how to integrate all the elements of the solution from a technical, marketing and business point of view. The first face-to-face meeting runs for five working days during which students design a first draft of the solution for the challenge at hand organize themselves to work as a team during the semester and assign responsibilities to each team member according to the number of ECTS credits they get for their work. At the end of the week the envisaged solution by each team is discussed with the company, the teachers and the students so all agree on a definite proposal. After this first meeting, students work at their home institution working at a distance through online groupware platforms. At the end of the project all modules are integrated and the fully operational system, a unique product, is presented by the students as a team. The second and final meeting took place in Porto, Portugal 19-23 June 2023, students get together face-to-face again to finalize their solution, their final presentation and to discuss the delivered product with the client company and the teachers. The team as a whole must guarantee that all parts integrate well to produce a unique solution for the problem and present the full solution to the project jury. The project jury was composed by a teacher from each partner institution and a representative from the client company.

In total there were 5 projects implemented in the academic year 2022/23 and 2 of them will be presented where HMU students participated. The first project was suggested by MEFA, a German company based in Trier. The students of team MEFA were tasked with developing an online platform for real estate marketing, which essentially functions as a way for companies to promote real estate projects to the worldwide housing market. There are

various online marketplaces for real estate currently in operation, however this platform stands out by having a user-friendly design and providing a separate, customizable front-end page for each company's profile and real estate projects, thus allowing companies to maintain their branding while using MEFA's website. The platform provides a dynamic environment for clients to submit their projects, each provided with a personalized webpage for showcasing the projects they've been working on and a specialized administrative page was developed for managing and approving client submissions, while offering an admin dashboard for efficient project management. The webpage design closely followed the branding aesthetics of MEFA, parent company, and thus achieving uniformity. The development was carried out on Node.js, React, MongoDB, and Express while communication was managed by tools like Slack for messaging, Github for version management, and Google Meet for virtual meetings. The team consisted of ten members from different nationalities and was characterized by its diversity and uniqueness. Disregarding the language and physical barriers, teamwork was achieved and developed within the agile Scrum framework, comprising Front-end, Back-end, and Marketing subgroups. The Marketing team focused on research around the topic and what innovative ideas could be implemented while the Front-end and Back-end teams worked closely together on the development of the platform and thus adding functionality to product. This unified and collective effort led to the creation of MEFA real estate platform, which was then delivered to the client for the initialization of its operation. The project was a learning experience for all involved, regarding both the development tools that were used and also working as a team in a remote-working environment. For many of the members, it was their first time using the tools that were decided upon, such as React, Express and Git/GitHub and considering the scope of the project, everyone certainly learned many new skills and gained plenty of valuable experience from the project.

The second project was introduced by YEAT, a Belgian startup company. The YEATapp is a mobile application that sends immediate notifications whenever a highly recommended restaurant has a last-minute table available. The challenge was to create a Dashboard for the Admin and a Web version for concierge services. Regarding the Admin Dashboard, it simplifies oversight for administrators, handling user management, settings adjustments, and ensuring smooth operations while the Web version catering to concierge services, it offers clients a platform to request assistance and enjoy exceptional service. The main focus is on the effectiveness and the provision of a fantastic overall experience for all involved. The team was divided into four subgroups: Development, Human Resources, Marketing-Business and Design. The Development team, who was responsible for the creation of the Dashboard for the Admin and the Web version for concierge services, was

divided into 2 sub-teams, the Front-end and the Back end. In the process of creating the dashboard and web version, we employed the technology stack consisting of ReactJS for the front-end, Laravel for the back-end and MySQL as the database management system. The Human Resources team was inquired to formulate and create a career plan, to search for employer branding strategies and to deal with recruitment. Regarding the Marketing-Business team, it was engaged in analyzing the database, developing a marketing plan and conducting research on potential expansion into new countries. In conclusion, the design team's primary focus was the design aspects of the Web Version and documentation. Moreover, they undertook the responsibility of managing the Miro Board and executing the rebranding of the application while it is noteworthy to mention that Trello was selected as the tool for team organization and management. Additionally, it is important to highlight that communication within the team was achieved through diverse platforms including Google Meets, Discord, and WhatsApp.