PROJECT SUMMARY AND INTRODUCTION

Project Purpose:

The prime goal of this project is to build, test, and assess the functionality as well as the design for an interactive course on the website, employability.life, such that it fosters student engagement. The aim is to complete this with the coordination and combined efforts of the SCRUM master, product owner, and the development team for the project.

Client Information

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Scope:

The scope of the project will involve the project team, and the stakeholders such as the registered users, mentors, and admin staff of the Moodle platform and would be limited to the development, testing, and assessment of all the features as well as functionalities of Moodle. A well-tested Moodle will be handed over to the client which matches all their requirements. The Moodle would be designed such that it is user-friendly and easy to operate for its users. All the participating students would be given full access to the Influence courses, developed in the project. Moreover, a reporting dashboard will also be developed for the trainers and administrators. The Moodle platform would include a variety of functionalities and some of them are as listed below:

- Login and logout
- Lecture sessions (40-minutes long)
- Booking system for the mentor sessions
- Where required, design and implement the auto-evaluated submissions.
- An easy-to-use interface for trainers to evaluate the assignments
- Save the captured data in a data structure in a machine-readable form
- To enable students to create audio chat rooms that would allow them to invite presenters as well as participate in discussing career-related matters.

Objective:

The project objective is to develop, test, and evaluate all the functionalities of the website, employability.life, and thereby hand over a well-tested Moodle to the client. Moreover, the goal is to facilitate the clients, with a Moodle that is highly user-

convenient, and easily operable by them. Additionally, the aim is to examine all the attributes of activities that are demonstrated under the tag Influence and thereafter furnish the clients with a few relevant recommendations to enhance the student engagement, as well as the efficiency of this implementation undertaken by the client. Precisely, the target is to design and develop, a well-tested, and functional interactive course, along with functionalities, such as a self-paced course, consisting of 40-minute lecture sessions, a booking system for the mentor session, and tracking usage of multimedia content. Furthermore, our intent is to design an interactive element for Moodle, by making usage of H5P and relevant technologies, then to plan and deploy an auto-evaluated submission, wherever required, and equip the trainers with an easily operable interface for evaluating the assignments.

Assumptions and Constraints:

Project Assumptions:

It is believed that the student engagement and interactivity with the learning management system-Moodle of Employability.life, will be enhanced effectively. Moreover, the courses under the tag Influence would be more efficient, easily operable, as well as accessible to all the students that are participating in those courses. Generally, it is presumed to develop, test, and deploy a fully functional and flawless interactive course on LMS, by making usage of technologies, namely, Moodle LMS, HTMS, Power BI, and H5P. It is expected that the developed self-paced course, would include 40-minutes long lecture sessions, a booking system for the tutor session, a tracking system for multimedia content, interactive attributes, an auto-evaluated submission facility, and a user-friendly interface for mentors to examine the assignments.

Project Constraints:

The project is limited to some of its constraints, such as prioritization of the teamwork, within the given budget. The given budget is a constraint, as it involves a lot of factors, such as the salaries of each team member, and the cost of non-functional requirements, as well. Moreover, the other significant constraint is of time, as the project is huge, involving the evaluation, development, and execution of courses on Moodle, to fulfill all the client requirements, within the given timeframe, which could be a huge deal of time management. Lastly, the communication, and coordination among the group members, could be a huge task to achieve. Additionally, there is always a possibility of external factors that might act as an obstacle to flawless the delivery of the project, hence the scrum master, and product owner, along with the development team, should be making a mitigation plan, to rectify any such situations.

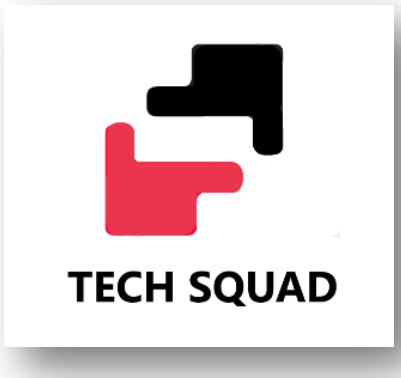
Project Deliverables:

The phase-wise project deliverables are as mentioned, below: -

- To design, develop, and test a fully functional and self-paced interactive course on LM, Moodle platform, with 40-minutes of the length of lecture sessions.
- To check, and test all the functionalities of the course, developed using technologies like H5P.
- To demonstrate the development instances to the students, registered on the Moodle platform.
- To build specifications for a fully-fledged Influence app, that enables the students, registered with Moodle, to make audio chat rooms on career-related matters, and thereby foster them to create relevant communities.
- It will show the available time for doctors and staff, so the work goes placidly, and patients get to know the availability of the doctors.
- Furthermore, approaching the second phase of the project, a reporting dashboard would be developed for the trainers, and administrators of the Learning Management System, Moodle.
- To demonstrate the data capturing mechanism, using a plethora of formats.
- To facilitate the authenticate learners of Moodle, to create the audio chat rooms, (Clubhouse style), wherein they would be enabled to invite their presenters, as well as the participants, for discussing any career-related matters.

PROJECT ORGANISATION

Project Team Organisational Structure:



The structure of the project group is described below, along with the specifications of individual tasks distributed among the team members. For making the agile project, the SCRUM methodologies would be applied, wherein three significant roles, namely the SCRUM master, product owner, and the development team, have been adopted by our team members.

All the roles and responsibilities of SCRUM are mentioned below: -.

SCRUM ROLES	ALLOCATED MEMBERS	ASSIGNED RESPONSIBILITIES
SCRUM MASTER	HELISHA PATEL	❖ To educate the team members, about their roles, and responsibilities. ❖ To plan, and organize stand-up group meetings, on daily basis. ❖ To assist the product owner with the product backlog. ❖ To be capable enough to handle any obstructions witnessed during or between the implementation process. ❖ Accountable for enhancing the interactions between the development team members, and the client to foster the productivity of the team. ❖ To ensure good interaction between the development team and the product owner.
PRODUCT OWNER	NADUN	❖ To manage and prioritize the product backlog. ❖ To communicate the vision and requirements of the client to the development teams and the scrum master.

		❖ To serve as a liaison between the product, and its development. ❖ To oversee the development stages of the project, and evaluate their progress at each iteration. ❖ To motivate the team members, and be accessible to them.
DEVELOPMENT TEAM	JAHANVI DARJI SANDEEP KAUR	❖ Responsible for the performance of the project. ❖ To provide all the intermediate results of the project work at the end of each sprint, to the scrum master. ❖ To participate in the daily scrum and other essential group meetings organized by the scrum master. ❖ To give an estimated amount of time required for delivering the tasks, assigned while developing the project.

Non-Functional Requirement:

The Non-Functional requirement, particularly emphasizes the quality attribute of a system. These requirements, assist a project team, to comprehend the system usability, security, and other relevant non-functional attributes, that play a vital role in the successful deployment of the project.

Some of the non-functional requirements are as described below:

1. **Platform**
   For effective development of the project, the hardware, and software platforms on which our system will execute play a crucial role, their specifications are as listed below: -

1.1 Server Software Requirements

- **Supported Operating Systems**:
  a. Windows operating server 2022, 2019, 2016, 2012, and 2008.
  b. Windows 11, 10, 8, 7, and Vista.

- **Supported Databases**:
  a. Microsoft SQL Server:
  b. Microsoft Azure SQL DB

- **Microsoft .NET Framework 4.5+ is required (default, installed for you)**

1.2 Server Hardware Requirements

a. 64-bit processor (For Desktop)
b. Octa-Core 2 GHz or higher (For smartphones)
c. 16 GB RAM or Higher
d. 8 GB free space

Since there would be a huge number of learns on Moodle, we would need a high-speed database and devices for the same.

2. Communication

Below listed are some ways through which the system could communicate with the other systems:

- Client-server model
- Transmission Media
- Shared information printers and different peripherals
- Network Interface Card
- Local Operating System
- Network Operating System
- Hubs and Switches

3. Performance

As high-tech hardware and software servers would be used for the project development, the system performance would be sufficient for usage by a large sum of students, tutors, and administrators, on Moodle. If in any case, the number of system users exceeds a certain limit in future use, then the system performance might get affected, and there would be a need to upgrade the system.

4. Security and Privacy

For the security and privacy of the system users, certain security protocols could be followed while project development, as described below: -

- To have a multilayer firewall setup on the system server.
- All the critical project-related data must be backed up on the server from time to time.
- The data of registered students, and tutors, must be encrypted.
- The assignment submitted by a particular student, must be visible to the respective tutor only, and not any other student.
- In the audio chat rooms created by the students, the audio recorded must be deleted, if no incident is reported in the respective room.
- There should be records of the activity and task performed by each student, as a means of security.

5. Audience, Usability, and Accessibility

The tutors, administrators, as well as the students of Learning Management System, Moodle, would be using this interactive course, that is being developed, so language preference would be English, as being an international language, it would be easily operable by the users, all around the world. Moreover, the course to be developed under the Influence tag would be easily accessible by all the registered students, and tutors of Moodle.

6 Reliability

The system of the project to be developed must be reliable. Hence, all the functionalities, such as the 40-minutes long self-paced course sessions, the booking, and tracing system, all these functionalities would be tested effectively, thereby delivering a flawless project, with maybe a 99% uptime.

7. Modifiability

The project would be designed and developed keeping the modifiability factor in mind, thereby facilitating any updation or alterations, that might be required in the future. In the future, while modifying the project, more interactive, and interesting features could be added to the facility of creating audio-chat rooms, by making usage of advanced H5P technologies, thereby fostering even more student engagement.

8. Economic

Nowadays all the technologies required for the project development, and deployment, namely H5P, HTMS, and Power BI, gives free access to its users, to an extent. So, our

project team would make use of such platforms, to successfully deploy the project, within the allotted budget.

9. Standards

Following are some standards, the project team must abide by: -

The development team must adhere to W3C consortium standards, which is the international standard for the usage of H5P, and the standards recommended are as mentioned below: -

- Browser Compatibility: As per the set standards, the deployed website, or application must operate efficiently on all the main browsers, namely, chrome, Microsoft edge, and internet explorer.
- Consistent document types declarations: As the international standards are applied, it means that any HTML editor could be used for developing the web page.
- Enhanced availability: W3C recommends taking into consideration the visually impaired people while developing the website.

Our project team would abide by all the above specified laws, to develop the project as per the international standards. ("Standards - W3C", 2022)

Reference:

Standards - W3C. W3.org. (2022). from https://www.w3.org/standards/.

Server Minimum Requirements. Docs.oracle.com. (2022). Retrieved 17 April 2022, from https://docs.oracle.com/cd/E28385_01/en/E28377/html/STA102_Planning_Install_PreInst.5.5.htm.