

**ST10085622**

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**PROGRAMMING 3B**

**PORTFOLIO OF EVIDENCE: PART 1**

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## **TASK 1:**

User Engagement, to my understanding, in software development plays an eccentric part in sales and real-time use of software program. It is the features within the application that keeps the users entertained and captivated while utilizing the software program(s).

Klein (2018) defines User Engagement as a metric that measures a user's participation, interaction, and connection with a product or service. She follows by adding that it is frequently evaluated by monitoring user behaviours, such as time spent, frequency of use, and activities taken.

I have identified and adapted 5 *User Engagements* strategies from these authors:

(Cescon, 2021), (Klein, 2018)

### 1. Gamification:

Adapting the research of Dichev and Dicheva (2017), Gamification is the use of game design features and concepts in non-game environments to improve user engagement and motivation. This user engagement strategy gives targets the entertainment of user, as well as providing motivation to open the application. An example of this would be utilizing game features such as *badges*, *achievements*, *points-system*, and *leaderboards* to keep the user coming back to gain a certain achievement and, or points.

A real-time example of this would be Duolingo. It uses learning a new language(s) in a competitive nature, and competition is what drives nature.

### 2. Personalization and Customization:

Personalization and Customization are often used interchangeably but that is not the case. Personalization differs from customization in that it alters the experience automatically for the user, whereas customization enables the user to intentionally modify the experience. According to the words of (Salesforce, Inc, 2024) Personalization refers to automatically collecting user data, and tailoring content visible to them to match their data collected. This keeps the user

interested without much to do on their behalf. Customization gives users the ability to intentionally customize the interface to suit their needs and likeability.

3. Social Interaction:

The research of Cescon (2021), shows this strategy is crucial when scaling up an application, it connects users from different places and provides a slightly new market to be explored. Implementing real-time chat, or a forum for users to meet, share and communicate. Social connections boost user engagement.

4. Reward System:

Implementing a rewards system to users for utilizing the application for certain number of minutes is an example of a reward system, which falls under gamification. The reward system can be anything the software company deem a necessity or want for their target market. Real-time example would be Spotify and how they allow users to use their app for 30minutes without ads if they listen to a certain number of ads without skips.

5. Feedback and Recognition:

It's crucial to give prompt, insightful feedback to keep users interested. This can be attained by swift feedback on jobs or tasks that have been completed or pull requests. Acknowledge and honor user accomplishments in public, review progress and conduct check-ins on a regular basis, collect and respond to user input to make the platform better over time.

## **Task 2:**

<https://github.com/lemi-manqoyi/MuniciPAL.git>

## **References:**

Cescon, M. (2021). *5 Best Ways to Keep Computer Applications Students Engaged*. [online] Icevonline.com. Available at: <https://www.icevonline.com/blog/best-ways-keep-computer-applications-students-engaged> [Accessed 18 Sep. 2024].

Dichev, C. and Dicheva, D. (2017). Gamifying education: What Is known, What Is Believed and What Remains uncertain: a Critical Review. *International Journal of Educational Technology in Higher Education*, [online] 14(1). doi:<https://doi.org/10.1186/s41239-017-0042-5>.

Klein, L. (2018). *UX for Lean Startups*. O'Reilly Media.

Salesforce, Inc (2024). *Personalization redefined: What Is a Personalization Engine?* [online] WhatIs.com. Available at: <https://www.techtarget.com/whatis/definition/personalization-engine>.