

Changemakers: Creativity and Value Creation - Project Management & Innovation

ACCA5033

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1. Introduction

In today's digital society, technology plays a central role in simplifying everyday activities. Over the past decade, there has been a significant shift from traditional physical systems to digital platforms, especially in areas such as communication, banking, and retail. One common issue that many consumers face is the management of multiple loyalty or membership cards. Retailers use these cards to reward customers through discounts, points, and special offers. Digital transformation continues to expand, there is an increasing demand for solutions that improve convenience and accessibility. Consumers now expect fast, simple, and reliable digital services that integrate smoothly into their daily routines. This change in user behavior has encouraged businesses to explore new ways of delivering value through technology. In particular, the use of web-based platforms and cloud computing has enabled the development of systems that are both scalable and accessible from anywhere [3].

The proposed project, “**LoyaltyWallet**”, aims to address these challenges by providing a centralized digital platform for storing and managing multiple loyalty cards. Instead of carrying physical cards, users can access all their memberships through a single web interface. This not only improves convenience but also reduces the risk of losing cards and missing rewards. The platform is designed to be user-friendly, ensuring that individuals with different levels of technical knowledge can easily navigate and use the system.

Another important aspect of this project is its contribution to environmental sustainability. The production of plastic cards contributes to waste and environmental pollution. By replacing physical cards with a digital solution, “LoyaltyWallet” supports efforts to reduce plastic usage and promote eco-friendly practices. This aligns with global trends focused on sustainability and responsible consumption.



In addition, many existing solutions require users to download separate mobile applications for each retailer, which can become overwhelming and inefficient. LoyaltyWallet provides a more practical alternative by integrating multiple cards into a single platform. This reduces complexity and enhances the overall user experience. Furthermore, the use of secure authentication and data protection measures ensures that user information is handled safely, which is essential in modern digital systems [2].

This report presents the design, development, and evaluation of the LoyaltyWallet platform.

Task 1 focuses on project management and system design, including planning, resources, and technical structure.

Task 2 explores enterprise and innovation aspects, such as business strategy and environmental analysis.

Task 3 reflects on the skills developed during the project and evaluates its impact on society, as well as the risks involved.

Overall, the project demonstrates how digital innovation can be applied to solve real-world problems in a practical and effective way.

2. Task 1: Project Management

From Lecturer

Task 1: Project Management:

Your answers to the questions below should refer to a project/research area of your choice (related to your programme of study). The task answer should be approx. 600 words with supporting visuals/chart/images and citations (approx. 5 sources).

Q1. Project Management & Planning:

- Document the **Project scope** inc. proposed **solution** to your project aim/idea/problem, the **required Technologies/resources** to be used, a **project timeline**, a **schedule & constraints**.
- Using a software tool of your choice, create a **Gantt chart** to document your project stages.
- Document a suitable **Development method** to help you plan and complete your project.

Q2. Project Design:

- Document and describe some project 'Design' work. 2 pieces required e.g. requirements specification, sketches/drawings, storyboard, wireframes, flow chart/UML diagram, ERD data structure), network structure diagram, network security architecture/diagram.
 - Optional: In addition to the slides and your own research. The areas covered in the following online topics can also help you answer the question above: Online section: Unit 3 Topic 4: Making it happen.

Q1. Project Management & Planning

The LoyaltyWallet project is designed to solve the problem of managing multiple physical loyalty cards by providing a centralized digital platform. The main objective is to develop a web-based system where users can securely store and access their membership cards at any time. This improves convenience and reduces the risk of losing cards or missing rewards.

The scope of the project includes essential features such as user registration, login authentication, and card storage. Additional functionalities, such as search and categorization, are included to enhance usability. However, more advanced features, such as integration with retailer databases or automatic reward updates, are excluded from the initial version due to time and resource limitations. This ensures that the project remains realistic and achievable within the academic timeframe.

From a technical perspective, the system uses front-end technologies such as HTML, CSS, and JavaScript to create an interactive user interface. The back end is developed using Node.js, while MySQL is used for database management. Cloud services, such as Amazon Web Services (AWS), support scalability and data storage, allowing the system to handle increased user demand in the future [6].

The project is structured into five main phases:

- planning,
- design,
- development,
- testing,
- and deployment.



Figure 1: Project Scope & Timeline

These phases are organized using a Gantt chart, which helps track progress and manage deadlines. Planning involves defining requirements and objectives, while design focuses on system architecture and interface layout. Development includes coding, testing ensures functionality and identifies errors, and deployment makes the system available to users.



Figure 2: Gantt Chart

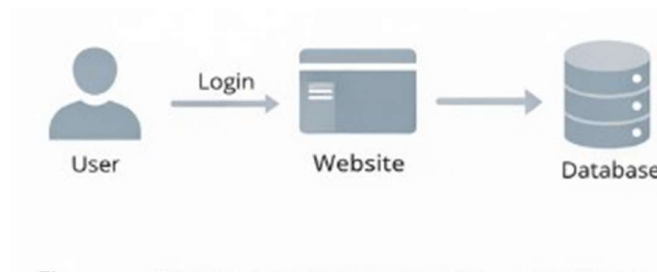
Several constraints may affect the project. Time is a major limitation due to academic deadlines. Budget constraints limit access to advanced tools and services. Technical challenges may arise due to limited experience with certain technologies. In addition, data security is a critical factor, as the system must protect user information and comply with regulations such as GDPR [2].

To manage these challenges, the Agile development methodology is used. Agile supports iterative development, where the system is built in stages and continuously improved based on feedback. This approach increases flexibility and helps identify issues early in the process, leading to better project outcomes [1].



Q2. Project Design

The design of the LoyaltyWallet system focuses on both technical structure and user experience. The system architecture follows a client-server model, where users interact with the platform through a web interface. The server processes user requests and communicates with the database to store and retrieve data. This structure ensures efficient performance and supports scalability as the number of users increases [3].



The wireframe represents the layout of the platform, including key pages such as the login page, user dashboard, and card management interface. The design prioritizes simplicity and ease of use, allowing users to navigate the system without difficulty. Clear menus, organized content, and intuitive controls improve the overall user experience.

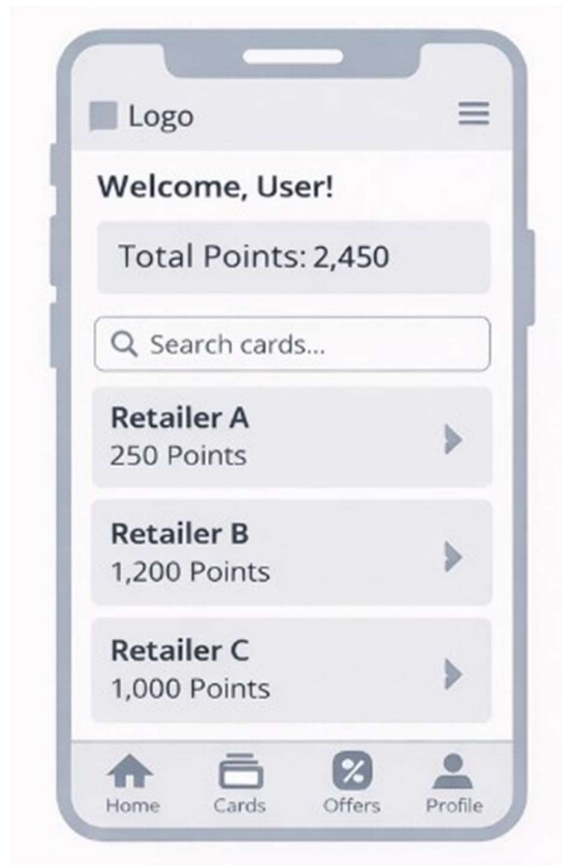


Fig. 5 LoyaltyWallet Wireframe

Security is an essential part of the system design. Since the platform handles personal data, it is important to implement secure authentication and data protection measures. Encryption and secure login systems help prevent unauthorized access and protect user information [2].

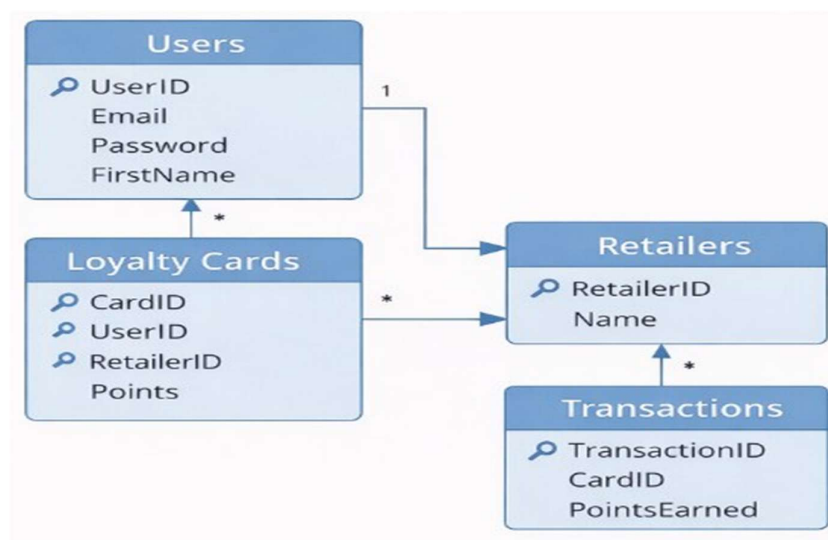


Fig.6. ERD Data Structure

In addition, the design considers future scalability and system performance. Cloud-based infrastructure allows the system to adapt to increased demand without affecting performance. This ensures that the platform remains efficient and reliable over time. Overall, the design phase ensures that the system is functional, secure, and user-friendly, while also preparing it for future development and expansion.

3. Task 2: Enterprise & Innovation

From lecturer

Task 2: Enterprise & Innovation:

Your answer to the question below should relate to a project/research area of your choice. The task answer should be approx. 600 words with supporting visuals/images and several citations. **Complete either**

T2:Enterprise or T2:Innovation questions below:

- **T2-Enterprise:**
 - **Q1.** Document some key considerations from an example PEST & SWOT analysis for a Tech Company of your choice including some legal & ethical considerations.
 - **Q2.** Related to your project idea document a potential Tech Start-up name, Logo, Business type (Legal classification), a Business Strategy and initiatives that could fund your potential start-up.
 - Optional: The areas covered in these online topics can also help you answer the questions: Unit 2 Topic 4: Creating Value. Unit 3 Topic 1: Power of Networks & Topic 4: Making it happen.
- **T2-Innovation:**
 - **Q1.** Document some key considerations from an example PEST & SWOT analysis for a Tech Company of your choice including some legal & ethical considerations.
 - **Q2.** Related to your project idea describe the concepts, methods, practices and tools you would use to develop, deploy, maintain and evolve the practical element of your project if it was implemented within a large organisation.

T2 – Enterprise

Q1. PEST & SWOT Analysis

The LoyaltyWallet platform operates within a dynamic environment influenced by political, economic, social, and technological factors. A **PEST** analysis helps to understand these external influences.

From a political perspective, the platform must comply with data protection regulations such as the General Data Protection Regulation (GDPR). These laws require companies to handle user data securely and transparently, which directly affects system design and data management processes [2]. Failure to comply could lead to legal penalties and loss of user trust.

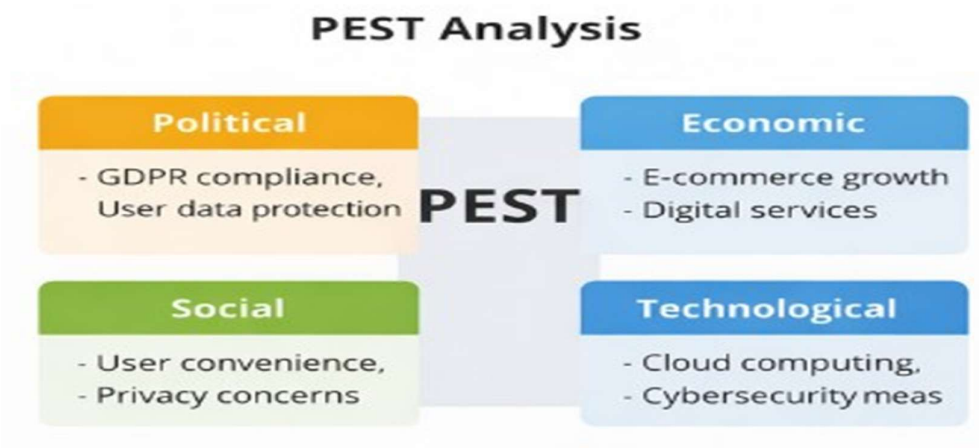


Fig. 7 PEST Analysis

Economically, the growth of digital services creates strong opportunities for platforms like LoyaltyWallet. More consumers are willing to use digital tools, which increases potential demand. However, competition from existing apps and platforms may reduce profitability and market share.

Social factors also play an important role. Users increasingly prefer convenient and efficient digital solutions.

Technologically, advancements in cloud computing and web development support the creation of scalable and accessible systems. However, these technologies also require strong cybersecurity measures to prevent data breaches [3].

The **SWOT** analysis highlights the internal strengths and weaknesses of the project. Strengths include simplicity, accessibility, and relevance to modern consumer needs. Weaknesses include limited features in the initial version and reliance on user trust.

SWOT Analysis	
Strengths	Weaknesses
• Simple solution • Centralized platform	• User hesitation • Limited initial features
Opportunities	Threats
• Mobile apps • Retail integration	• Strong competition • Data security risks

Fig.8 SWOT Analysis

Opportunities include expanding into mobile applications and forming partnerships with retailers. Threats include competition and cybersecurity risks [4].

Q2. Tech Start-up Proposal

“Loyalty wallet” can be developed as a digital start-up that focuses on improving customer experience in retail environments. The platform offers a clear value proposition by reducing the need for physical cards and simplifying card management.

The business model is based on a freemium approach. Basic features are provided for free to attract users, while advanced features, such as analytics or premium storage, can generate revenue. This model allows gradual growth and user acquisition.



Fig.9 Logo

The business structure is a **Private Limited Company (Ltd)**, which offers limited liability and supports investment opportunities. This structure is commonly used by start-ups.

Funding sources may include personal investment, angel investors, venture capital, crowdfunding, and government grants. These sources provide financial support for development and expansion.

Marketing strategy is essential for success. Digital marketing methods such as social media promotion, online advertising, and partnerships with retailers can help attract users. Customer feedback is also important, as it allows the company to improve the platform based on user needs and preferences.

T2 – Innovation

Q1. Innovation Environment Analysis

From an innovation perspective, LoyaltyWallet benefits from rapid advancements in digital technology. Cloud computing, mobile applications, and web platforms enable the development of scalable and accessible systems.

Political factors influence innovation through regulations that affect system design and data protection [2]. Economically, the growth of digital markets supports innovation, although competition remains strong. Socially, users expect fast, efficient, and user-friendly solutions. Technologically, continuous advancements allow for system improvements and new features [3]. The innovation SWOT analysis highlights creativity and adaptability as key strengths. However, threats such as cybersecurity risks and market competition must be carefully managed to ensure long-term success.

Q2. Concepts, Methods, and Tools

The project uses several important concepts and tools to support development. User-centered design ensures that the system meets user needs and provides a positive experience. This approach focuses on usability, accessibility, and simplicity [5].

Agile methodology is used to support iterative development and continuous improvement. By developing the system in stages, it is possible to test and refine features regularly, improving overall quality [1].



Fig. 10

Technologies used include HTML, CSS, JavaScript, Node.js, and MySQL, which provide a strong foundation for web development. Cloud platforms such as AWS support deployment and scalability, ensuring that the system can handle increased demand [6].

Maintenance is also important for long-term success. The system must be updated regularly to fix errors, improve performance, and add new features. Monitoring tools help ensure that the platform remains reliable and efficient over time [7].

4. Task 3: Project Reflection

From lecturer

Task 3: Project reflection:

Produce a reflection in which you reflect on a project idea that you could take forward. Your reflection should document the following points below. The answer to this task should be approx. 600 words, with several citations.

- How you intend to use this opportunity to develop new skills?
- How could your project/new skills have a positive impact on and contribute to society?
- Identify some risks/challenges your project could face and document what you can do to reduce/remove them.
 - Optional: The areas covered in the following online topics can also help you answer the task questions: Online section: Unit 2 Topic 4: Creating Value.

The development of the LoyaltyWallet project has contributed significantly to both my technical knowledge and personal skills. One of the most important areas of improvement is problem-solving. Throughout the project, I was required to analyse a real-world issue and design a practical digital solution. This process helped me understand how theoretical concepts can be applied in real situations, which is an essential skill in the field of information technology.

Another key area of development is project management. By using tools such as Gantt charts and Agile methodology, I was able to organize tasks, set priorities, and manage my time more effectively. Agile development allowed me to work in stages and continuously improve the system based on feedback and testing results. This iterative approach made the development process more flexible and efficient, as problems could be identified and solved early [1].

The project also improved my research and analytical skills. By applying frameworks such as PEST and SWOT analysis, I gained a better understanding of the external and internal factors that influence a digital product. These tools helped me evaluate the strengths, weaknesses, opportunities, and threats associated with the LoyaltyWallet platform, which is important for both technical and business decision-making [4].

In addition, I developed stronger independent working skills. Managing different aspects of the project, including planning, design, and evaluation, required a high level of responsibility and organization. I learned how to work independently, meet deadlines, and maintain focus on long-term objectives. This experience has increased my confidence in handling complex tasks and completing projects successfully.

From a technical perspective, I gained knowledge of web development technologies and system architecture. Understanding how front-end and back-end components interact has improved my overall understanding of how digital platforms function. I also became more aware of the importance of data security and user privacy, especially when dealing with personal information. Implementing secure authentication methods and understanding data protection requirements, such as GDPR, highlighted the importance of building trustworthy systems [2].

The LoyaltyWallet project also has a positive impact on society. By reducing the need for physical loyalty cards, the platform contributes to environmental sustainability by lowering plastic waste. In addition, it improves convenience for users, making everyday shopping more efficient. This demonstrates how technology can be used to solve simple problems while also providing broader benefits.

However, the project also presents several risks and challenges. One major risk is data security. If user data is not properly protected, it could lead to breaches and loss of trust.

Another challenge is competition, as many companies are developing similar digital solutions. Market acceptance is also uncertain, as some users may be hesitant to adopt new technologies. Technical issues, such as system errors or performance limitations, may also affect user experience.



Fig. 11

These risks can be managed through appropriate strategies. Security measures such as encryption and regular system updates can protect user data. Continuous testing and monitoring can reduce technical issues and improve performance [7]. In addition, focusing on user experience and collecting feedback can help increase user satisfaction and adoption.

Overall, the project has been a valuable learning experience. It has helped me develop important technical, analytical, and personal skills that will be useful in future academic and professional work.

5. Conclusion

From Lecturer

- Conclusion (No more than half a page).
- Reference list (IEEE format).

Appendices: Supplementary information

An appendix page/section can be used to include relevant supplementary information, such as supporting information to task answers and/or tutorial activity answers (e.g. Example Tech Company Business Strategy, PEST & SWOT analysis).

In conclusion, the LoyaltyWallet project demonstrates how digital innovation can be applied to solve everyday problems in a practical and effective way. By replacing physical membership cards with a centralized digital platform, the project improves convenience, accessibility, and

overall user experience. This reflects the growing importance of technology in simplifying daily activities and supporting digital transformation across industries.

From a project management perspective, the development of LoyaltyWallet highlights the importance of structured planning, clear timelines, and the use of Agile methodology.

These elements ensure that the project can be completed efficiently while allowing flexibility for continuous improvement. The use of design tools such as system architecture diagrams and wireframes also supports the development of a functional and user-friendly platform. From an enterprise and innovation perspective, the project demonstrates strong potential as a start-up idea.



Fig, 12

The freemium business model provides a realistic approach to attracting users while generating revenue. The analysis of external and internal factors through PEST and SWOT frameworks shows that, although challenges such as competition and data security exist, there are clear opportunities for growth and development.

Finally, the reflection on skills and risks highlights the importance of continuous learning, adaptability, and problem-solving. The project has contributed to the development of both technical and analytical skills, which are essential for future professional work. While risks such as cybersecurity and market competition must be addressed, these can be managed through appropriate strategies.

Overall, the LoyaltyWallet project illustrates creativity, innovation, and value creation can be combined to produce a meaningful digital solution with real-world impact.

6. References

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