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University of Bahrain

College of Information Technology

Department of Computer Science

ITSE 305: Software engineering project  
BSc in Software Engineering

**Phase 4 – Balagh**

**System**

**Group Members:**

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# Monitoring and controlling

The art of project management necessitates the careful monitoring and control of project performance, which involves comparing actual progress with planned management activities. This crucial function, essential at all stages of the project, acts as a form of oversight. Monitoring and controlling encompasses the regulation, reviewing, and tracking of progress towards project objectives. The goal is to evaluate the actual work done in relation to the planned work, assess performance, and determine if corrective or preventive actions are needed. Moreover, it requires the provision of information that supports status reporting, progress measurement, and forecasting, and the development of a plan that mitigates negative impacts on budget, time, and resources. The primary activities associated with the monitoring and controlling phase include utilizing essential documents such as progress reports and change requests, ensuring maximum efficiency in project management.

## Request for Proposal

**Date**: 6-july-2023

**Project Name**: Balagh System

**RFP Name**: User experience designer (UX)

**Purpose of RFP:** We are currently seeking a highly skilled UX designer who is capable of creating a user-friendly digital experience for our system. Our system is intended to be distributed across multiple countries and cultures, and it will be used by a diverse group of individuals. As such, it is crucial that the designer has experience conducting research and analyzing user needs. They should also be proficient in developing and testing prototypes, as well as providing recommendations for improving our digital products.

**Background Information:** Balagh System Company is a fast-growing IT and data science company. Our new system has some design issues that need to be addressed. Due to the system's complexity, it is challenging to create a user-friendly interface, particularly for citizens and resident users. As we cater to a diverse group of people with different cultures, it is essential to ensure that our digital products are user-friendly. We are currently seeking a qualified UX designer who can conduct research, analyze user needs, develop and test prototypes, and provide recommendations to improve our digital products.

**Basic Requirements:**

- Minimum of 5 years of experience in UX design

- Demonstrated experience in conducting user research, developing and testing prototypes, and providing recommendations to improve digital products

- Strong portfolio showcasing past UX design work

- Proficiency in UX design tools such as Sketch, Adobe Creative Suite, and InVision

- Experience designing for diverse user groups across different cultures and countries

- Ability to work collaboratively with cross-functional teams, including product managers, developers, and other stakeholders

**RFP Process:**

- Interested UX designers should submit a proposal in response to this RFP by August 6, 2023

- Proposals should include a cover letter, resume, portfolio, and references

- Selected candidates will be invited for an interview, which will include a design exercise

- Final selection will be made based on the quality of the proposal, interview performance, and overall fit with the organization

**Statement of Work and Schedule Information:**

- Conduct user research to understand the needs and preferences of our target user groups

- Develop and test prototypes for new digital products and features

- Provide recommendations to improve existing digital products

- Work collaboratively with cross-functional teams to ensure design meets business requirements and technical constraints

- The expected duration of the project is 6 months, with a start date of September 1, 2023

**Appendices:**

- Appendix A: Balagh System brand guidelines

- Appendix B: User personas and user journey maps

- Appendix C: Technical specifications and constraints

## 1.2 Change Request

**Project Name:** Balagh System

**Date Request Submitted:** 15- August -2023

**Title of Change Request:** New primary functionality

**Change Order Number:** 1

**Submitted by:** Maha, Musherah

**Change Category:** Scope, Schedule, Cost, Technology

**Description of change requested:**

The project manager and programmer have recognized the importance of incorporating a payment function into our system. This feature will allow users to make online payments directly through the application, with options for selecting payment methods, tracking payment history, and receiving receipts and confirmations. As every user will have to pay government fees to complete certain transactions, this function will streamline the process and save time.

**Events that made this change necessary or desirable:**

The inclusion of the payment feature in our system is crucial in reducing queues, hassle, and time consumption associated with the payment process or receiving receipts and confirmations from any ministry. The increasing demand for online services has led to the need for such a feature, and feedback from users who tested the application prototype also highlighted the importance of incorporating features that facilitate the payment process. Moreover, governments nowadays require that all transactions related to certain services be conducted online, making the payment feature an essential aspect of our system.

**Justification for the change/why it is needed/desired to continue/complete the project:**

The decision to add a payment function to the system is crucial in achieving the project's overall goal of satisfying stakeholders. This feature will improve the system's usefulness and efficiency by providing users with a streamlined and convenient way to complete transactions. As a result, it is expected that the adoption of the system will increase, leading to its success. Additionally, the payment function will ensure compliance with government regulations regarding online payments for government services, thus avoiding any potential legal or regulatory issues that could disrupt the project. Overall, the addition of this feature will benefit both users and government officials and is a vital aspect of the project.

**Impact of the proposed change on:**

**Scope:** New feature will expand our scope in payment and transactions

**Schedule:** Feature will be added to execution process which may lead to delay in schedule

**Cost:** Total of 30,00$ for development

**Staffing:** Payment and Transaction engineers

**Risk:** Function may not fully be implemented as desired

**Suggested implementation if the change request is approved:**

If approved, the payment function will be fully integrated into the system, including all ministries of government. Implementation should start in the execution phase, with thorough testing and adequate training and support. Successful implementation will improve user experience and increase system adoption, contributing to the overall project success.

**Required approvals:**

|  |  |  |
| --- | --- | --- |
| **Name/Title** | **Date** | **Approve/Reject** |
| Maha Mohamed – Project manager | 27/3/2023 | Approve |
| Musherah Moqbel - Programmer | 27/3/2023 | Approve |
| Fatema Salman - Software tester | 27/3/2023 | Approve |
| Noor Jaafar - Designer | 27/3/2023 | Approve |

## 1.3 Integration

Integrating payment functionality into our system requires a few steps. The first step is to choose the right payment gateway for our application needs. After choosing a payment gateway, we need to set up an account with the provider, obtain an API key and other required credentials, and customize the gateway to work with our application. The next step is to design and implement a user interface that allows the user to enter payment details and submit the payment for processing. After a user submits a payment request, our application should initiate a payment transaction with the payment gateway and receive a response indicating whether the payment was accepted or rejected. Our application should also handle payment confirmations, update payment status for transactions, and notify users of payment results. Additionally, the application should provide users with the ability to view payment history and download receipts for each transaction. Finally, the integration should be secure and compliant with relevant data protection regulations, and regular security audits and vulnerability assessments should be performed. These procedures are usually associated with the execution phase of a project including the integration of payment capabilities into a system. The real work of executing the project plan occurs during the execution phase, and the actions stated in the paragraph would need to be completed to properly incorporate payment capabilities into the system.

## 1.4 Validation

Validating a system involves ensuring that the payment functionality works correctly and meets user requirements, Collaborate with stakeholders to clearly define the requirements for the new payment functionality. This includes identifying the desired payment methods, tracking payment history, generating receipts, and providing access to payment information history, Develop a comprehensive test plan such as functional testing, Test the payment flow end-to-end by making payments using different payment methods (credit/debit cards, digital wallets), Verify that payment details are correctly captured, processed securely, and reflected in the system. Test the selection and management of payment methods, ensuring that users can add, edit, and remove payment methods as required. Verify that payment history is accurately recorded, including transaction details, payment amount, date/time, and associated user information. Test the generation and delivery of receipts to users after successful payments. Ensure that receipts contain relevant information, such as transaction ID, payment details, and timestamp. Evaluate the user experience during the payment process, Conduct security assessments to ensure that payment transactions and user data are handled securely. Test for vulnerabilities such as data leakage, unauthorized access, and final step in the validation change request is sharing the validation report with relevant stakeholders, including the change requester, project manager, and decision-makers. Ask for their approval and sign-off on the new payment functionality.