B-PURSE SYSTEM

Software Requirements Specification (SRS)

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Doc Version: 1.0

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Introduction

The goal of this project is to make budgeting and transaction tracking easier for accountants. The majority of the time, accounts are handled manually utilising excel sheets. Keeping track of the records is quite time-consuming. By developing software that can be utilised at any time, we want to reduce the complexity of managing transactions and budgets.

Requirement specification

Feasibility analysis

Technical Feasibility

Technology, topology, material evaluation, and selection

Technically these are technologies we have selected to solve this problem we are trying to address.

a. Reactjs for frontend UI development
b. Java with Spring Boot framework for backend development
c. PostgreSQL as our main database

Design and prototyping

Since we will be developing a web application. We shall use Figma as our design and collaboration prototyping software.

Cost analysis

The requirements include

- 4 world-class software engineers paychecks

- Computers to develop software on
- Servers to run the web application on
  - 32 GB RAM
  - 200 GB SSD

2.Economic Feasibility

We estimate the project’s cost around 1 M USD. considering all the requirements needed to execute it.

operational Feasibility

1. Performance**:** previously used systems of management at the end result in mismanagement of resources but our solution will overcome those drawbacks in a small time.
2. Information**:** the school manager will be able to see all the transactions made, which transaction has required them more money compared to others and at the end, it will show the remaining balance in their account according to the budget plan.

3. Economy: This project is cost-effective because the only thing needed to access the system is the Internet apart from that our system reduces the cost of paper documents which are used to record transactions.

4. Control: The Information will be accurate and have enough security as our system provides access to information to only authorised users provided by the organisation.

5. Efficiency: B-purse is a good and efficient solution. It doesn't require high resources. It makes good use of time. It requires less effort to perform needed actions to manage transaction overflow.

6. Services: The service given in this project is flexible and expandable. It will be easy for users to access information and perform the transaction accordingly.

- It is feasible to use on the side of the school accountant since it doesn't need external skills such as excel commands.

- The school manager feels good to scroll down the statistics of the monthly expenditure reports.
- The reports are self-automated weekly so that the school leaders can keep track of the flow of money.

Schedule Feasibility

This project will take 7 months into the process to be ready for the market

Here we have the actions that will occur one after another as

Follows:

1. 30 November 2021: Project initiation will be completed.
2. 15 December 2021: Project design must have been completed.
3. 16 December 2021: Start the implementation phase.
4. 1 March 2022: The release of the first phase of the project.
5. 1 April 2022: Release of the last version of the project.
6. 2 April 2022: The test of the app to the different organisations while also correcting some bugs found in the app.

7. 2 May 2022: Close the project and start earning money.

Functional requirements

- The system should allow school managers and accounts to create a budget.
- The system should allow accounts to make a budget on financial transactions.
- It should allow managers to get reports about all transactions.
- It should allow all accounts and managers to view history about cash transactions.

Non-Functional Requirements

1. Security

Users should be able to view data they are privileged to view, the system should allow accountants to view data that are related to them and managers to view their own and manager all other users.

2. Performance

defines how fast a software system or its particular piece responds to certain users' actions under a certain workload. In most cases, this metric explains how much a user must wait before the target operation happens (the page renders, a transaction is processed, etc.) given the overall number of users at the moment. But it's not always like that. Performance requirements may describe background processes invisible to users, e.g. backup. But let's focus on user-centric performance.

3. Scalability

Assesses the highest workloads under which the system will still meet the performance requirements.

4. Mentainalility

Maintainability defines the time required for a solution or its component to be fixed, changed to increase performance or other qualities, or adapted to a changing environment. Like reliability, it can be expressed as a probability of repair during some time. For example, if you have 75 percent maintainability for 24 hours, this means that there's a 75 percent chance the component can be fixed in 24 hours.

5. Availability

And finally, availability describes how likely the system is accessible for a user at a given point in time. While it can be expressed as a probability percentage, you may also define it as a percentage of time the system is accessible for operation during some time period. For instance, the system may be available 98 percent of the time during a month. Availability is perhaps the most business-critical requirement, but to define it, you also must have estimations for reliability and maintainability.

As you can see, these three metrics are closely connected. And more importantly, you should approach them together if you decide to document them as non-functional requirements to your system.

6. Organisational

Data should be well designed in such a way that it boosts the productivity of the users.