**Software Development Proposal**

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Prepared for: Monique M. Ledbetter | Plan Smart

Prepared by: Muller van As | 25961926 | Exspendite

 **Exspendite**

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13/11/2017

### Monique M. Ledbetter

Plan Smart   
765 Wolmarans St   
Blinkpan   
2250

Dear Ms. Ledbetter,

Re: Enclosed Software Proposal

Please find enclosed our detailed software proposal for your kind consideration.

At Exspendite we are aware that creating client-oriented software takes a mixture of technical excellence and clear communication and our firm does our very best to ensure you receive both. We know that every client is unique and we strive to deliver an individual, innovative and affordable proposal every time and to follow it through with an outstanding delivery, which is both on time and within budget.

We also pride ourselves on our after-sales client-care including our guarantees, staff training and onsite and offsite support.

Finally, we realize that you are very busy and wanted to thank you in advance for your time spent reviewing our proposal.

Yours Truly,

Muller van As

Exspendite



Executive Summary

Exspendite is a mobile application created for small business owners to easily track their day-to-day expenses. Most owners of small businesses cannot afford a clerk to do all their admin work and do not have the time to go through every receipt they get each day. Most business owners do not keep record of all the daily expenses which they payed in cash and only have a receipt as proof. Small Business owners don’t always have time each day to add the receipts to an excel spreadsheet, calculate the tax and send it to their accountant. When they do have time, most owners already lost most of their receipts and cannot add all their business expenditures or know what their biggest expense is each month.

Exspendite will make this process much faster and easier. By only adding the merchant name where you bought the item or service for your business, the item or service description and price. Exspendite will automatically add the date of the purchase when a new receipt is added and calculate the tax for you. This data will be uploaded to a cloud network where it will remain safe and secure. This makes the application very simple and easy to use. The user will then be able to view their expenses for each month and be able to export each monthly expenditure to an excel document and send it via email to their accountant.

Exspendite will change the way all small business owners keep track of their business expenses with a plain, straightforward design and easy to use interface we help you save time and money by keeping track of all your expenditures.

AS ACCEPTED BY Plan Smart

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

### Monique M. Ledbetter

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**Table of Contents**

1. Project Overview …………………………………………………p.5

2. Technical Obstacles ……………………………………………..p.6

3. Industry and Market Risks……………………………………….p.6

4. Budgetary Risks…………………………………………………..p.7-8

5. Hardware and Software………………………………………….p.8

6. Milestones and Reporting ……………………………………….p.9-10

1. Analysis

2. Development

3. Testing

4. Finalizing

5. Demonstrating

7. Contact us………………………………………………………….p.11

8. References…………………………………………………………p.12

1. **Project Overview**

We aim to create an application that is both simple and easy to use. To do this, we will make the design and layout of the application as simple and straight forward as possible. When opening Exspendite, the user will be presented with a login page and can also navigate to a “create new user” page. When a user have logged in to the main page, it will only display your business name and the different months with their total expenses. The user will then be able to click on any month and view all the expenditures for that month. There will be three buttons available for the user, a remove receipt, add receipts and export button. This will allow the user to remove receipts, add new receipts and export the entire month’s expenditures to an excel spreadsheet and email it.

Exspendite will be created for small business owners, therefore we need to ensure that all their needs are met. Small business owners want a simple easy to use application that does not require time to understand or learn. User’s want to be able to open the application for the first time and understand exactly how to use it without going through a tutorial or manual. This is exactly what Exspendite aims to give to our users. By giving Exspendite a simple layout with only the basic needed function we give our users an application that anyone can use.

Exspendite’s release will only be available for android devices and therefore we decided to use Android Studio to design the architecture and layout of our mobile application. For Exspendite to be developed and tested, a web-service and cloud-service will be created to manage the processing and storing of the data. Exspendite will make use of Amazon Web Services (AWS) - Cloud Computing Services to create the web service and cloud service needed.

Exspendite aims to develop and test the application between the 18th and 25th of November. A detailed report of milestones and objectives is available under 6. Milestones and Reporting (p.9). Exspendite will give 24-hour support for any users for the first 3 months from its release. This is to fix any bug reports or issues users might have on different android devices.

1. **Technical Obstacles**

Our main obstacles in developing Exspendite, will be implementing the export to share your receipts as a excel document and emailing it to your accountant. This will be an invaluable asset to the application as it would allow users to save time by not having to type all of the information over to a spreadsheet and then send the document by email. We will use AWS’s web services and MySQL database to convert the data to an excel document and email it to the accountant.

Other obstacles include making Exspendite sync daily with the cloud service automatically to make sure you do not lose your data even if your phone is lost or stolen. Our web service should also be able to quickly and efficiently produce the desired output for the user. We will conduct test’s to ensure that we meet the minimum speed and efficiency requirements.

1. **Industry and Market Risks**

One of the risk’s in building a new mobile application is spending a large amount of money and time in building an app that your target audience do not need or will not use. Here at Exspendite we have done our homework and heard from different types of small business owners that there is a need to keep track of their business expenses in a fast and simple way. *“Many businesses fall into the trap of creating an application from their own perspective, and not the perspective of the customer,” says Arash Zafarnia, Director of Business Development at Handsome.* Therefore we have already founded that there is a target market for Exspendite to be successful.

*“A small dev team may create an app that is then used by thousands or even millions of people,” Abinash Tripathy, CEO and cofounder of Helpshift*. In creating a new mobile application you also run the risk of having your application’s users grow too fast. What happens if too many people start using the app and you are not ready to facilitate all the users? This can lead to frustrated users that leave negative reviews of your application and delete your application. This is why Exspendite decided to release the application to a few users first and then see how often they use the application and how much strain it puts on our servers in three months’ time.

1. **Budgetary Risks**

To make sure that Exspendite does meet its milestones and goals we have created a table and GANTT chart below (6. Milestones and Reporting p.10) to keep you up to date on how we will start the process of developing the Mobile application. Communication between developers and users is of utmost importance to us and therefore we will report to you when we have met certain milestones.

To realistically analyse our application we need to measure its strengths and weaknesses by using the SWOT (Strength Weaknesses Opportunity Threats) analysis to see what our application’s characteristics are. Strengths and benefits Exspendite have over other similar applications include that it will be free on the app store. We also give the user the ability to export their data to an excel document and email it to their accountant. Exspendite will stick to the basics making the application easy and quick to use for users. The application will also be available on android versions (Marshmallow) that are currently the most active versions of android on google play store and therefore Exspendite will be compatible with most mobile devices that frequently use applications.

More and more mobile applications are created to help people with task’s that usually required hours of work, this indicated that mobile application development is a growing industry and investing in it now, will create more opportunities in the future. But being realistic, there is no limitation to perfection, Exspendite can experience problems when overwhelmed with too many new users. We consist of a small development team that does not have the man power to run our application on millions of devices yet. Exspendite also do not use a camera function to capture receipts and store them on a cloud network.

This gives us the opportunity to add extra functionality for our premium users such as adding the ability to capture receipts in the same way CamScanner captures documents and by analysing the amount of people that use our application daily we will also know when the right time would be to hire more developers and expand our business to other platforms. Threats Exspendite will face, is not having our application on iOS devices yet, but this will change as our application is more widely used.

|  |  |
| --- | --- |
| SWOT Analysis | |
| Strengths   * Free to download * Export and share data * Availability for users * User-friendliness | Weaknesses   * Inability to facilitate a large amount of users * Not implementing the camera capture of receipts |
| Opportunity   * Growing Industry * Fast loading and display of data * Adding extra functionality * In app purchases (Premium users) | Threats   * Not compatible with iOS |

1. **Hardware and Software**

The application will be used on mobile devices that uses Android operating systems. For mobile devices to be able to run Exspendite, they need ARMv5 or higher to run native code without modifications. A 200 MHz processor, 32 MB of RAM, and 32 MB of storage. This requirements is met by most smart phones, therefore we will not have a problem with our application being to slow on most users mobile phones. Exspendite will be created for Android 6.0 "Marshmallow" as this is the Android version most users on google play store use. (https://developer.android.com/about/dashboards/index.html)

To build Exspendite we will make use of Android Studio as it gives Gradle integration, advanced code completion and a stable system to develop mobile applications on. Managing your project in Android Studio is also much simpler and easier to do than most other Builders e.g. Eclipse. To develop our application layout, architecture and functions we will use java and html programming languages, which is an open source and future-proof development language.

To create our web service with Amazon’s Web Services we will make use of python and MySQL for functions and queries and storing of Exspendite’s data. AWS (Amazon Web Services) will be used as it can run in a virtual environment and so it can be implemented easily across platforms including new hardware architectures

## **6. Milestones and Reporting**

1. Analysis

An analysis will be done to gather all the required data and planning for Exspendite to be developed. Designing the basic layouts and architecture of the application will also be done in the first phase.

2. Development

The creation of the web service with AWS and the cloud services will be done. A database using MySQL will also be created and integrated with the web and cloud services. The last part of this phase includes creating the graphical user interface and making the application user-friendly and easy to understand.

3. Testing

All the components of the application will be tested to make sure your data is secure and that the flow of processes happen uninterrupted. This will also give the opportunity to test the application on different types of devices and make sure it is compatible with our target device.

4. Finalizing

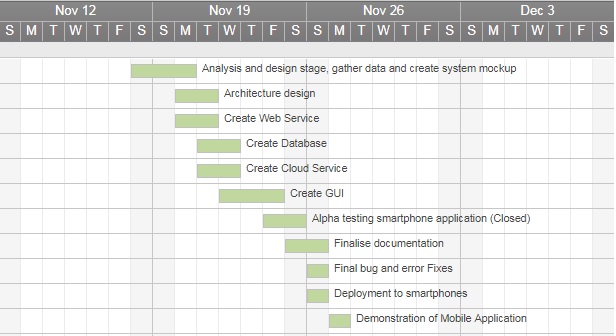
Fixing any remaining bugs or issues that have been reported by testers. We will also finish the documentation which will include all steps of creating and deploying the application. Adding extra functions in this phase if it is feasible.

5. Demonstrating

The mobile application is demonstrated and will be presented and explained in detail.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Milestone | Tasks | Reporting | Hrs | Date |
| 1.1 | Analysis and design stage, gather data and create system mock-up | None | 20 | 18/11/17 |
| 1.2 | Architecture design | None | 4 | 20/11/17 |
| 2.1 | Create Web Service | Email report | 4 | 20/11/17 |
| 2.2 | Create database | None | 5 | 21/11/17 |
| 2.3 | Create Cloud service | Email report | 5 | 21/11/17 |
| 2.4 | Create GUI | Client meeting | 6 | 22/11/17 |
| 3.1 | Alpha testing smartphone application (Closed) | Email report | 20 | 24/11/17 |
| 3.2 | Finalise documentation | None | 8 | 25/11/17 |
| 4.1 | Final bug and error Fixes | None | 4 | 26/11/17 |
| 4.2 | Deployment to smartphones | Email report | 3 | 26/11/17 |
| 5.1 | Demonstration of Mobile Application | Client meeting | 4 | 27/11/17 |

**GANTT CHART**

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**7. Contact us**

You can get in touch with us in any of the below ways:

By Phone:

(+27) 730212732

By Email:

mullervanas@gmail.com

If you would like to proceed with our proposal then you can sign the first page and return a copy to us by email.

In any case please feel free to call us to discuss the quote, request more information or for any other reason.

We look forward to hearing from you soon!

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1. **References**

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