



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

PROJECT TENDER

Project: RMB's Data Lake

CLIENT: RMB

Team: Creativate

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Here's a link to GitHub.

<https://github.com/SpheMalo/COS-301-Main-Project.git>

May 4, 2015

Contents

1 The Team	2
1.1 Jimmy Peleha	2
1.1.1 Interests:	2
1.1.2 Technical Skills:	2
1.1.3 Relevant Past Experience:	2
1.1.4 Non-Technical Strengths:	3
1.1.5 Why I chose this project:	3
1.2 Sphelele Malo	4
1.2.1 Interests:	4
1.2.2 Technical Skills:	4
1.2.3 Relevant Past Experience:	4
1.2.4 Non- Technical Strengths:	4
1.2.5 Why I chose this project:	4
1.3 Armand Pieterse	5
1.3.1 Interests:	5
1.3.2 Technical Skills:	5
1.3.3 Relevant Past Experience:	6
1.3.4 Non- Technical Strengths:	6
1.3.5 Why I chose this project:	6
1.4 Kgomotso Sito	7
1.4.1 Interests:	7
1.4.2 Technical Skills:	7
1.4.3 Relevant Past Experience:	7
1.4.4 Non- Technical Strengths:	7
1.4.5 Why I chose this project:	8
1.5 Ndivhuwo Nthambeleni	9
1.5.1 Interests:	9
1.5.2 Technical Skills:	9
1.5.3 Relevant Past Experience:	9
1.5.4 Non- Technical Strengths:	9
1.5.5 Why I chose this project:	9
2 Project Execution	10
2.1 Development Methodology	10
2.2 Client-Team Communication	10
2.3 Technical Issues	10
2.4 Technologies	10
2.5 Deliverables	10

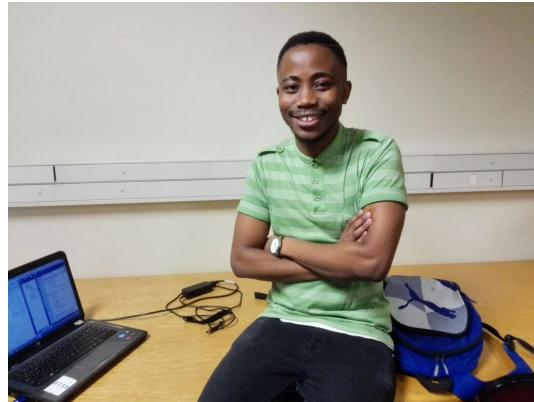
1 The Team



Introducing Creativate

Where Creativity meets Innovation

1.1 Jimmy Peleha



1.1.1 Interests:

- Chess
- Programming
- Travelling
- Gaming
- Socialising
- Programming Olympiads

1.1.2 Technical Skills:

- C++
- Java
- Python
- C#
- MySQL
- npm and Node.js
- PHP
- HTML, CSS
- XML
- Bootstrap
- Javascript
- Hardware Maintenance

1.1.3 Relevant Past Experience:

I am a two-time finalist in The Standard Bank IT Challenge. One of which my team placed third representing the University of Pretoria. This makes me confident that I can handle problems, especially in a team, whether I am under pressure or not. Synchronization and punctuality are key.

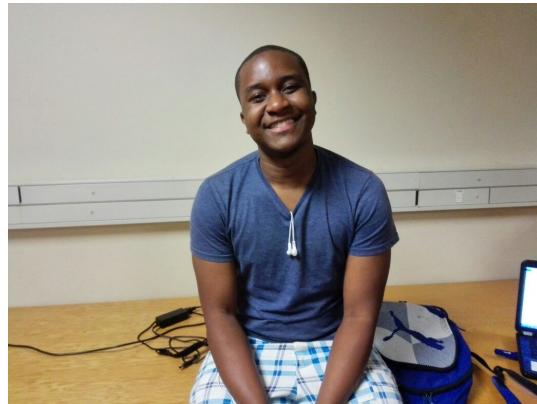
1.1.4 Non-Technical Strengths:

- Very approachable and charismatic
- Workplace experience
- Diligent
- Problem identification and solution finding
- Forward and straight to the point
- Honest

1.1.5 Why I chose this project:

I personally have an interest in the business side of ICT. Processing large amounts of data and transforming it into information that makes a difference in the overall performance of an organization makes me feel like I've just triggered a series of well-placed dominoes. This project will have my attention effortlessly. I can learn from this project because I plan to start my own business soon.

1.2 Sphelele Malo



1.2.1 Interests:

- Sports
- Security, networking and mobile development
- Gaming
- Listening to and the creation of music
- Reading

1.2.2 Technical Skills:

- Programming (Web development, C/C++, Java)
- Computer and electronics
- Complex problem solving
- Experienced with emerging technologies

1.2.3 Non-Technical Strengths:

- Teamwork
- Communication skills
- Cultural fit
- Responsibility and initiative

1.2.4 Why I chose this project:

This project provides a rare opportunity to apply the technical skills we've learned at school to a project that isn't IT related. I look forward to learning more about the financial sector and how the industry standard technologies associated with it work.

1.3 Armand Pieterse



1.3.1 Interests:

- Computer gaming.
- Programming/Software development
- Mixed Martial Arts
- Electronic Technology

1.3.2 Technical Skills:

- C++
- Java
- C#
- MySQL
- SQLServer
- MongoDB
- PHP
- HTML,CSS
- XML
- Javascript and JQuery
- Visual Basic

1.3.3 Relevant Past Experience:

I have experience in XML and C# or Java which I should benefit from for this project. Although I personally don't have much experience with a Data Lake, and how it works, I am very excited to gain an understanding of it as well as learning all the technologies and strategies that goes along with it.

1.3.4 Non- Technical Strengths:

- Hard Worker.
- Friendly and easy to work with.
- Perseverance
- Work well in a team and alone.
- Self-motivated.
- Motivating others.

1.3.5 Why I chose this project:

I personally chose this project, because I have a desire to learn more about real world IT problems/challenges and how to provide a solution for it. I am at the point where I'd like to apply what I've learned so far as well as to learn more as I do so. I believe choosing RMB's project is one of the best options, because you are a respected and well-known company/bank.

1.4 Kgomotso Sito



1.4.1 Interests:

- Soccer
- Web programming
- Gaming
- Listening to music
- Reading

1.4.2 Technical Skills:

- Programming
- Monitoring
- Operations and systems analysis
- Mathematics
- Computer and electronics
- Complex problem solving
- Active listening
- Agile methodology
- Experienced with emerging technologies

1.4.3 Relevant Past Experience:

2013 Present: vacation work with Interfront, designing customs using agile development, and did ICT support.

Experienced HTML, XML, SQL and even mongoDB and other emerging technologies studied during my course in the university

1.4.4 Non-Technical Strengths:

- Curiosity
- Teamwork
- Communication skills
- Cultural fit
- Responsibility and initiative

1.4.5 Why I chose this project:

I enjoy both web programming and analysis (informatics), combining the two, gives me an opportunity to make use of the skills I have learnt and at the same enjoy the experience. This makes this an ideal project, not only for me but also the team. My team also shares this interest and/or view, of which is very important going forward (project development)

1.5 Ndivhuwo Nthambeleni



1.5.1 Interests:

- Playing Bass guitar.
- Mobile development
- Soccer
- Gaming

1.5.2 Technical Skills:

- Programming (C++, Java, C#, PHP (Object Oriented), HTML5, JQUERY, Python and MySQL) 1 to 4 years.
- Programming within the MVC, layered and Micro Kernel architectural patterns.
- Android Mobile Application Development 2 year
- Coding within the python Django and node.js frameworks.
- Tutoring up to 1 year
- Working with Linux
- MS Server
- Advanced computer skills.

1.5.3 Relevant Past Experience:

- I have worked with the programming languages mentioned above for 3 years and I am quiet willing to learn new technologies that I do not have experience in.

1.5.4 Non-Technical Strengths:

- Great Communication skills (verbal and written)
- Can adapt to new working environments easily.
- Good at identifying patterns that lead to problem solving.

1.5.5 Why I chose this project:

I chose this project because I am looking forward to learning new technologies and enhancing my programming skills as well as applying the knowledge I have to solve problem space for this project.

2 Project Execution

2.1 Development Methodology

We will be using agile methodology, because it entails the flexibility needed for such a large-scale data management system. Delivering working aspects of the system will be guaranteed to the client should the implementation be successful.

2.2 Client-Team Communication

It is absolutely crucial to establish a quality communication line between the team and the client. This is so that there is synchronicity between the team's progress and the client's needs. As specified by the client, meetings will be held on a monthly basis. Any meetings in between will depend on the availability of the client.

2.3 Technical Issues

In terms of complexity, implementing a system that is easy to use and provides all the features needed by the client will be challenging. However, we will decouple front-end and back-end to hide away the complexity of the system from the user.

The expected influx of data from multiple sources makes it challenging to process the data. It is expected in different formats and a generic accepting feature has to be implemented. Enforcing the ISDA FPMML standard will help a great deal in achieving a solution for the aforementioned problem.

2.4 Technologies

C# will be the language of choice using Visual Studio IDE. As well as all the technologies specified by the client (e.g. Hadoop and mulesoft). As development planning commences, other optimal technologies will be defined to accommodate the needs of the system.

2.5 Deliverables

- A working system
- A working service with each client-team meeting
- Source code
- Documentation