



UNIVERSITEIT VAN PRETORIA
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PROJECT TENDER

PROJECT:
Instant Messaging Aggregator for Android
CLIENT: Will van Heerden

TEAM: <undecidables>

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1 The Team

1.1 Elzahn Botha



1.1.1 Interests

- Video Games
- Game development
- Programming
- Anime

1.1.2 Technical Skills

- I have already been exposed to Java and been working with it for about a year now

1.1.3 Past Experience

- I have experience in writing programs and systems in Java

1.1.4 Non-Technical Strengths

- Hard and dedicated worker
- Always ready to learn new technologies and languages
- Functions best under pressure

1.1.5 Why I want to do this project

This project seemed like it would be a rather interesting project to do as well as the fact that it would be great exposure to a whole new side of IT that I have not yet had the privilege of delving into. I believe that by doing this project I will get valuable exposure that can later help in other projects that I might attempt. This project also seems like it would be a good challenge since I am more comfortable with smaller projects and systems and by doing a larger project such as this it will help me broaden my range of capabilities. Lastly due to the size of the project and the strict time line the pressure will be greatly increased helping me to work at my best without losing interest with the project.

1.2 Jason Richard Evans



1.2.1 Interests

- Music Enthusiast
- Software development
- Adventure Sports

1.2.2 Technical Skills

- C++ and Java
- Web Development

1.2.3 Past Experience

Assignments and projects completed for University purposes. A lot of exposure with writing Java applications, servers and web-based applications.

1.2.4 Non-Technical Strengths

- Positive outlook on life
- Hard worker
- Good team worker
- An eager learner

1.2.5 Why I want to do this project

The world is buzzing with social networking and new services are added frequently. The reason I started with software development is to make life a bit easier for everyone, and this project fits right into that goal. Having a centralized point of communicating with people via different services will help individuals to ease communication and revolutionise the way marketing companies do their work.

1.3 Renette Ros



1.3.1 Interests

- Reading
- Playing Games
- Painting
- Puzzles and problem solving
- Programming
- New interesting technologies

1.3.2 Technical Skills

- Java
- C++
- Web Development
- HCI - User Experience and User interface design
- XML, XML Schemas and related technologies.
- Good at identifying possible problems and debugging code

1.3.3 Non-Technical Strengths

- Hard Worker
- I don't like to do things halfway
- I learn new technologies easily
- I'm very enthusiastic about things I'm interested in.

1.3.4 Why I want to do this project

I want to do this project because I think integrating the different instant messaging services, using their api's and keeping the system pluggable) will be an interesting challenge. I am also interested in this project because it is a useful real-world application that I can see myself using. I believe this project will give me valuable experience in using api's from web-based services and also in developing for android. I have a lot of knowledge about HCI and I believe this will be a good project to apply it.

1.4 Szymon Ziolkowski



1.4.1 Interests

- Networks
- Security
- Computer hardware and electronics
- Paintball
- Video games

1.4.2 Technical Skills

- C# and Java
- Web development
- SQLite, MySQL and SQL Server

1.4.3 Past Experience

I have no past experience that might be relevant to the project.

1.4.4 Non-Technical Strengths

- Don't give up easily
- Helpful

1.4.5 Why I want to do this project

1.5 Vivian Laura-Lee Venter



1.5.1 Interests

- Computer Games
 - First Person Shooter
 - Sport/Soccer
 - Strategic
- Music And Movies
- Watching Sports Fanatic:
 - Rugby
 - Football
 - Cricket
 - Athletics
- Software Development/Programming
- Computer Hardware/Gaming System builds Fanatic

1.5.2 Technical Skills

- Java and JavaFX
- C++
- Client/Server Applications (Beginner)
- Web Development (Beginner)
- Design Patterns
- Program/System Tester and Debugging

1.5.3 Non-Technical Strengths

- Hard-Worker
- Compationate
- Competent in knowledgeable/experienced fields
- Good Listener
- Diligent
- Integrity

- Willing and keen Learner
- Dedicated to my studies and work
- Team Player
- Leader when I need to be

1.5.4 Past Experience

- I have written Java programs and small systems as assignments for my modules at the University of Pretoria
- I have written C++ programs and small systems as assignments for my modules at the University of Pretoria
- I have written several types of server programs (e.g HTTP) as assignments for my modules at the University of Pretoria

1.5.5 Why I want to do this project

Stuff

1.6 Tienie Pritchard



1.6.1 Interests

- PC Games
 - RPGs (Role Playing Games)
 - Handheld
 - Dragon Ball Z - Legacy Of Goku
 - Golden Sun
 - MMORPG
 - Star Wars - The Old Republic
 - Guild Wars 2
 - MOBAs
 - DOTA 2
- Music
 - Paramore
 - Flyleaf
 - Rise Against
- Software Development
- Series Junkie, including
 - The Big Bang Theory
 - The Vampire Diaries
 - The Flash
 - Arrow
 - The Originals
 - Two and a Half Men
 - Friends
- Anime
 - Naruto
 - Fairy Tail
 - Bleach
 - Sword Art Online

1.6.2 Technical Skills

- Java, including experience in JavaFX and Swing
- C++
- General Networking - experience in implementing protocols such as HTTP, POP3 and SMTP
- Web Development (Advanced)
 - HTML4/5
 - JavaScript
 - JQuery
 - NodeJS
 - CSS3
 - XML
 - XSL
 - XSLT
 - XSL:FO
 - PHP
- Adobe Suite
 - Flash CS6/CC
 - ActionScript 3
 - Photoshop
 - Illustrator
 - Audition

1.6.3 Non-Technical Strengths

- I'm a hard worker and I don't give up easily
- I'm knowledgeable about general trends in development
- I'm extremely punctual when it comes to deadlines
- I'm a fast learner, and I'm willing to learn
- I'm extremely dedicated to any project I set my mind on
- I work well in teams

1.6.4 Past Experience

- Two years of experience in writing and implementing Java programs, specifically related to creating data structures and concurrency to achieve various tasks
- Two years of experience in writing and implementing C++ programs, including implementation of various design patterns as well as general program design
- As part of my Networks module, I have experience in implementing protocols such as HTTP, SMTP and POP3

1.6.5 Why I want to do this project

The instant messaging aggregator fits in perfectly with modern trends in Multimedia. Since my degree is in Multimedia, this project would definitely help me get more hands on experience with working with these systems in practice. Additionally, I feel that Instant Messaging is a very popular as a system which has everyday use, and thus an aggregator would be very relevant. Furthermore, this project presents an ideal opportunity to work with different APIs (specifically relating the Android Operating System).

2 Project Execution

2.1 Development Methodology

Our team will be using the **agile software development methodology**. The agile manifesto states that we find value in the following four points:

- **Individuals and interactions** over processes and tools.
- **Working software** over comprehensive documentation.
- **Customer collaboration** over contract negotiation.
- **Responding to change** over following a plan.

Although we find value in the items on the right, we value the items on the left, emphasised in bold, even more.

In agile development, the testing phase, which is usually separate from development in other methodologies such as Waterfall, runs concurrently with development. This increases the *quality* of the product and means that at any point in the development phase there will be a *working model* available with new features and functionality being added only after they pass vigorous testing.

The agile methodology has a proven low project schedule risk and the ability to respond to change, from the client or development team, quickly.

2.2 Keeping the Client Informed

- Wiki
- Weekly/Bi-Weekly Meeting

2.3 Initial Ideas on Solving Some Technical Challenges

- Social Network Messengers to be integrated:
- Finding existing APIs to communicate with each IM service
 - For example, via Facebook STK
 - SMSing easily be done on Android (i.e. ContentResolver)
 - ContentResolver can also load contacts
- Finding ways of associating contacts with each of the IM applications
 - Link based on name/first name
 - Cell Phone Number/E-mail
 - Storage of these associations and each contact from each IM application
 - We'll assume that each of the specified messenger's contacts are already stored on the user's mobile device, which we'll access via Android's STK

- Plugability
 - Use of Adapter design pattern

2.4 Technologies We Will Use

- Android Operating System
- Java

2.5 What the Client Will Receive

- A fully integrated (but basic) Instant Messaging Aggregator
- High quality interface design
- High quality UX design
- Good HCI
- Good performance from the application
- This application will be pluggable, allowing for easy integration of other IM applications