Project Tender

Project: Online Neighbourhood Watch Digital Forensic Tool-uWatch

Client: University of Pretoria

Team: MPHETamines

Mkhabela Phethile

Ghoord Taariq

Rosslee Estian

Martha Mohlala

Masilela Siboniso

Setati Harrison Maphuti

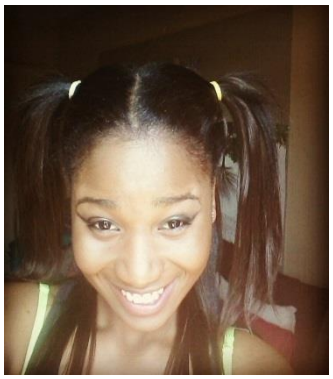
Department of Computer Science, University of Pretoria

Date: 4 May 2015

The Team

1.

- MKhabela Phethile



- Poetry, Clothing, Coding, Exercising and Reading
- NodeJs, Databases, C#, Java, Javascript, C++,Web languages, Mobile development, Networks, HTML, XML, CSS, JSON
- Cos Departmant Mini Project which I was able to work well with my team mates and got my component working and Integrate able.
- Fast learner, good research skills, can work well with other and easily adaptable to situations and new information
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2.

- Taariq Ghoord

- Coding, Gaming, Infrastructure
- C++, Java, Design Patterns, Javascript, NodeJS, Networks, HTML, XML, CSS
- Usage of Javablock , Mini Project experience
- Fast thinker, Problem solving and Code structure
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3.

- Rosslee Ronald Estian

- AI, Security, Computer Networks
- C++, C, Java, Python,Databases(Microsoft Access, MySQL, MongoDB),Web Design(HTML5, CSS, JavaScript, PHP, NodeJS)
- Fluent in both English and Afrikaans, as well as some knowledge of French and Arabic
- What makes me want to do the project boils down to two interests of mine. Firstly, syntactic signatures or individual coding styles and secondly, pattern analysis. Participating in this project will give me an opportunity to research these topics and apply that research in a practical manner.

4.

- Setati Harrison Maphuti

- Gaming, Web Development, Photoshop
- C++, Java, NodeJS, Javascript, Web Languages, Networks, HTML, XML, CSS, JSON, Design Patterns
- 301 Mini Project
- Creative Design ability
- I am a very creative person who likes working with visuals and symbols and this project provides that and allows me to explore the creative aspect of computer science.

5.

- Martha Mohlala

- Web Development, Computer Networks
- Web Development(HTML,CSS, Javacript, JQuery, Ajax, Php), C++, Java, C#, Mobile development, Databases, .NET, JAVA-EE, NodeJS
- 301 Mini Project
- I am an open minded person whose career focus is on software and web development and computer networks. I like to take on new challenges and see to it that I create easy and cost effective solutions. I enhance my problem-solving skill by learning fast and as much as possible. I am hoping one day I will put what I have learned to help in developing the world wide solutions.

6.

- Sboniso Masilela

- Security, web Development
- Web Development(HTML,CSS, Javacript, JQuery, Ajax, Php), C++, Java, XML, XSLT, XML Path, DB4Objects, NoSQL, SQL
- Developing an agricultural application that farmers use to improve the growth of their crops, it gives them personalized tips and agile methods based on what they have planted(not yet fully completed).

Project Execution

- Development methodology: Agile software development methodology
  - We intend on releasing new software at the end of every iteration and only Agile software development is best suited for this and the reviewing of software priorities at the end of every iteration will keep us focused on the bigger picture (Online Neighbourhood Watch).
- Contact with client: Communication with prof Hein Venter will be done via

  Email on a day to day base as needed and any face to face consultation sessions will be communicated further if need be. Providing feed back to our client is essential to the type of development methodology we have chosen, and this we feel ensures a fully functional software which is in line with the clients liking at the end of the development of the software.

- Solving technical challenges

  The system will be:

  _ Secure

  _ Cost effective

  _ encrypted

  This will make the application interacting with our data system able to adhere to the Following usability goals:

  1. Effectiveness - make the product good at what it is supposed to do.
  2. Efficiency - help to increase productivity.
  3. Utility - provide the functionality that the users want/need.
  4. Learnability - Make it easy for user to learn and use the product.
  5. Intuitive - Make it easy to use and understand the application.

- Potential technologies:
  - Java EE - is good for securing web applications, since security is one of the core quality of the uWatch.
  - OO Databases - for storing images, audio and video clips.
  - SSL - for establishing encrypted link between web server and web browser/web application Methods/Protocols for accessing the uWatch
  - HTTPS - for accessing the web application

- Implementation plan

  This aims to outline the System Development Life-Cycle (SDLC) of the proposed project solution. The project team will be submitting the following documents (further documentation to be included at a later stage):
- Requirements Specification document
  - This document will provide a comprehensive description of the uWatch digital forensic tool. This requirement specification document will give a detailed description of the purpose of the system, system features and interfaces and formally stipulate the systems functional and non-functional requirements, its data requirements, quality requirements and the constraints under which it should operate.

- Architectural Specification Document
  - This document will provide a comprehensive description of uWatch digital forensic system. This architectural specification will give a detailed view of the purpose of the uWatch digital forensic system with regard to its overall architecture and architectural

features. This will then formally stipulate the subsystem views, policies, and its data requirements, as well as the constraints under which the system operates.

- Design Specification Document
  - This document will provide a design specification for the uWatch digital forensic system, this will specify the design and layout of the system as specified in the related Documents below. This design specification should help with the planning and Implementation of a product which adheres to the following usability goals:
    Effectiveness - is the product good at what it is supposed to do?
    Efficiency - does the product help to increase productivity?
    Utility - does the product provide the functionality that the users want/need?
    Learnability - is it easy to learn to use the product?
    Intuitive - is it easy to use and understand? Etc.
    Included in all the above stipulated documentation will be:
    1. Unified Modelling Language (UML) diagrams to further illustrate the flows, operations, Sequences etc. that form part of the system's operation.
    2. Database Entity Relationship (ER) diagrams to illustrate the system entities that will Form part of the system's persistent data.
    Users and installation manual
    These documents will provide detailed instructions of the installation and the use of the system to ensure effective and efficient use of the system.