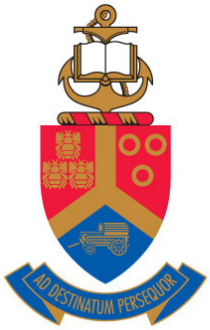

UNIVERSITEIT VAN PRETORIA
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YUNIBESITHI YA PRETORIA

COS 301

Department Of Computer Science

Main Project Architectural Requirements and Initial Architecture Design Functional Requirements

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IMPAKD link

For further references see gitHub. May 24, 2016

Contents

1 Vision

2 Background

3 Software Architecture

3.1 Architecture requirements

3.1.1 Architectural scope

3.1.2 Quality requirements

3.1.3 Integration and access channel requirements

3.1.4 Architectural constraints

3.2 Architectural patterns or styles

MVC (*Model View Controller*)
Allows the system's states to change and it encapsulates the interactions from the user and transforms these intercations into business logic.
Reason:

- Reduce presentation layers complexity and improves flexibility
  - Separates responsibilities
    - Provide view onto information - ***View***
    - React to user events - ***Controller***
    - Provide business services and data - ***Model***
  - Allows each component to change independently
- Full decoupling
  - Model from both *view* and *controller*
- Simplification
  - Through separation of concerns
- Reuse
  - *Model* components and *View* components
- Maintainability
  - Different components can be used, developed and maintained by different memebers of a team
    - *Model* - backened developers
    - *View* - UI designers
    - *Controller* - Front-end developers
- Improved Testability
  - Model/business services tested independently of UI
  - UI tested with mock model

3.3 Architectural tactics or strategies

3.4 Use of reference architectures and frameworks

3.5 Access and integration channels

3.6 Technologies

4 Functional requirements and application design

4.1 Use case prioritization

Critical:

- calculateROI
- getDefaultValues
- setDeafultValues

important:

- Register
- Login
- logout
- addProperty
- updateProperty
- deleteProperty
- displayGraphs
- displayStatistics

Nice-to-have:

- updateProfile
- generateReport

4.2 Use case/Services contracts

4.3 Required functionality

4.4 Process specifications

4.5 Domain Model

5 Open Issues