Contingency Management System

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Project

- A web application employing the principles of Contingency Management to aid staff of a drug treatment center.

Background

- Contingency Management is a psycho-social treatment approach which focuses on the consequences of a person's actions by rewarding or depriving them of incentives, based on their behaviour.
- Personal correspondence
  - Dr. Nancy Petry (low-cost contingency management treatment approach)
  - Staff of a Dublin drug treatment center which employ a paper based approach.

Methodology

- Aspects of the Agile Scrum Design Methodology applicable to a single developer development team.
- System is divided into individual sprints/independent modules.
- Plan and Design
- Develop
- Test and Review

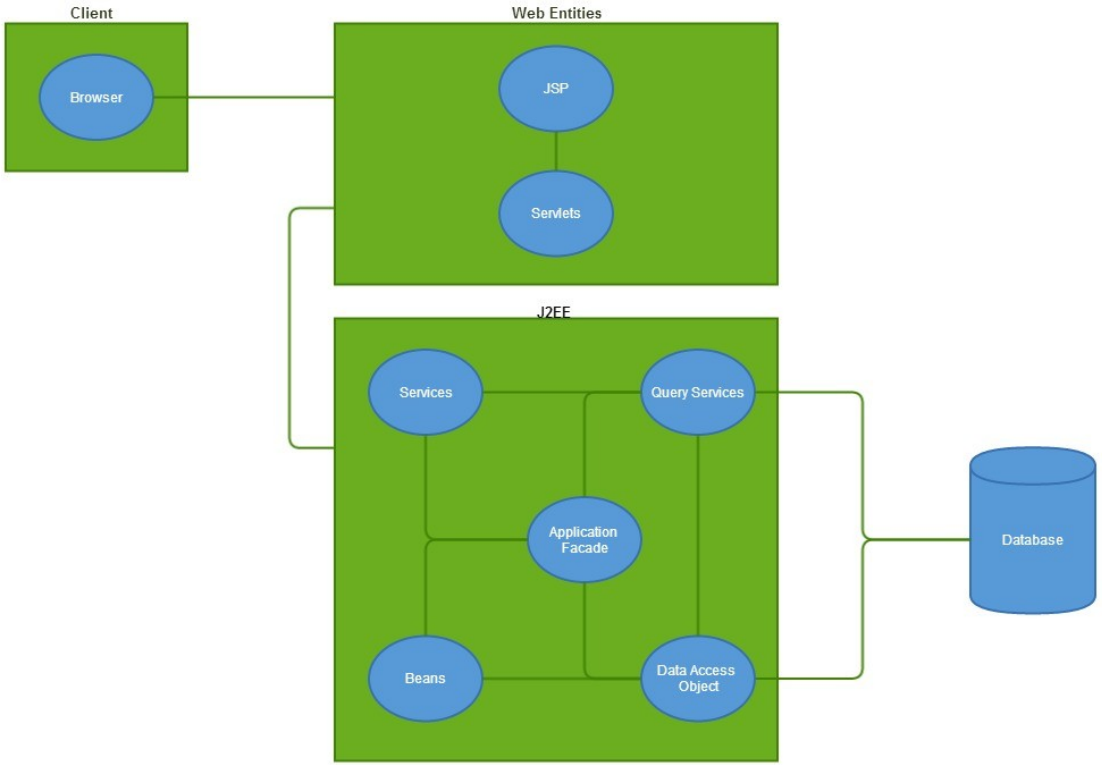
Technologies

Operating System(s): Developed on Windows 7, compatible with any OS supporting a 'modern' web browser.

- **Programming Language(s):** Java, JSP, JavaScript, JQuery, HTML5,CSS3 and Drools
- **Database(s):** MySQL
- Drools Rule Engine

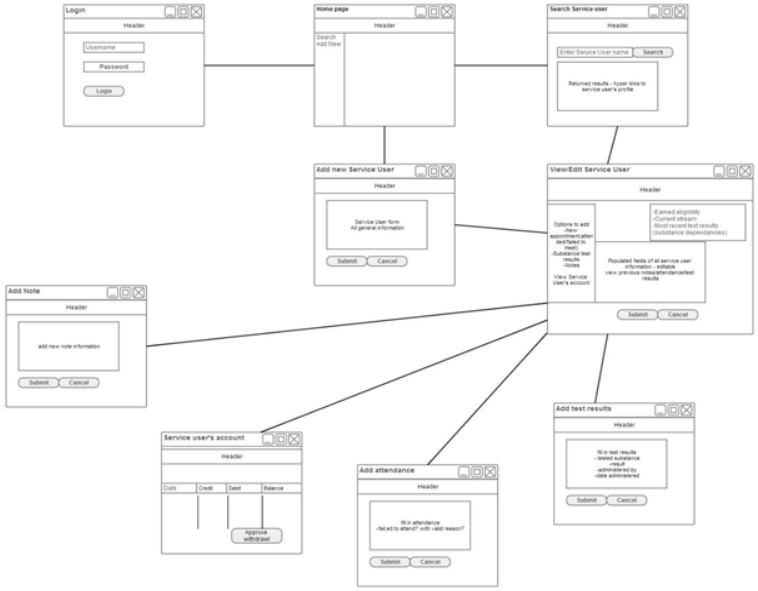
Technical Architecture

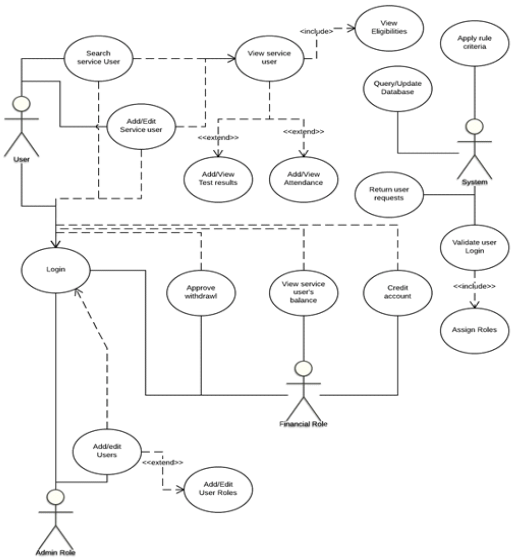
- 3-tier architecture using J2EE core design patterns.



Front End

- Front end rendered through client's web browser



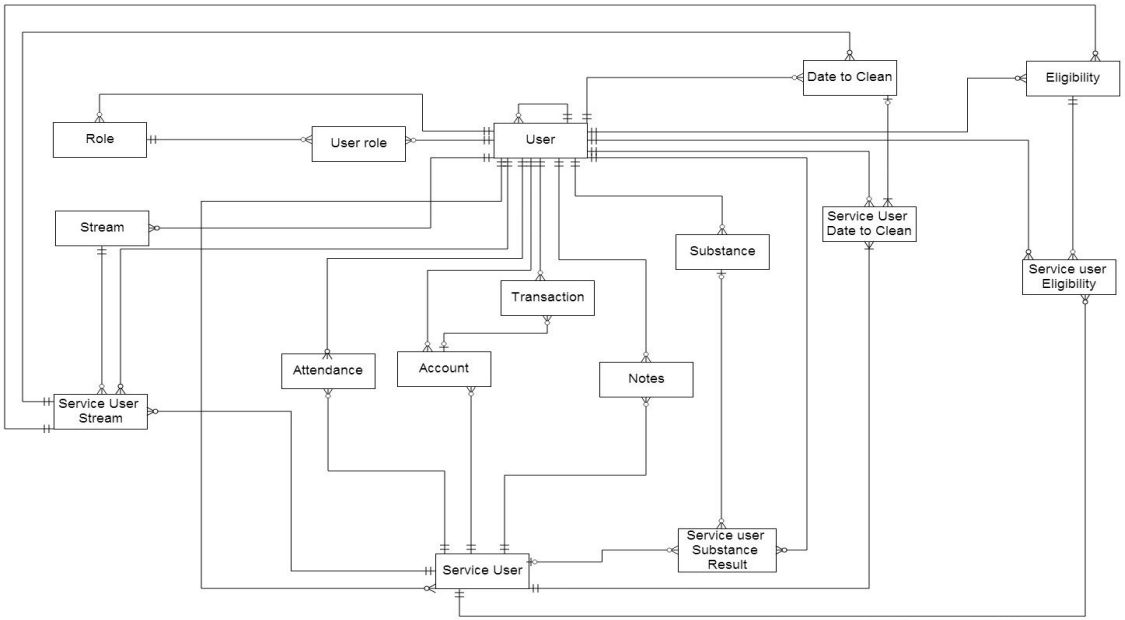


Middle Tier

- *JavaBeans, Application Facades, Data Access Objects*
- *JDBC MySQL Connector*
- *Deployment Descriptor/Application Context*

Back End

- Client Information
  - Identifying and demographic information
  - Attendance/ substance test results/ Notes
  - Transactions and account History



Risk Management and Mitigation

- Integrating rule engine into the Java application.
- *Completing the full system*
  - *Correct and reliable calculation and application of rules.*
  - *Intended functionality and features.*
  - *Presentable and intuitive user interface.*
- Horizontal Prototype (as displayed –Front End)
- Vertical Prototype

Evaluation Criteria

- Thorough full system testing based on per-defined test cases and user expectancies.
- Evaluation will be based on the improved efficiency and productivity of real users of the Contingency Management approach
  - Has their work load been reduced/ less laborious?
  - Is the correct criteria applied?
  - Correct results?
  - Enhanced user experience?

Future Work

- December – January
  - Complete Front End – Middle Tier functionality through individual sprints.
  - Document progress.
- *February – March*
  - *Design and implement rule based system and integrate into Java application.*
  - *Improve and enhance front end user interface.*
  - *Test and Evaluate.*
  - *Final report.*

Thank you!

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Questions

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