Open MRS – DSS Coding & Alerts

CSC868 – Group 1

Group 1 Members

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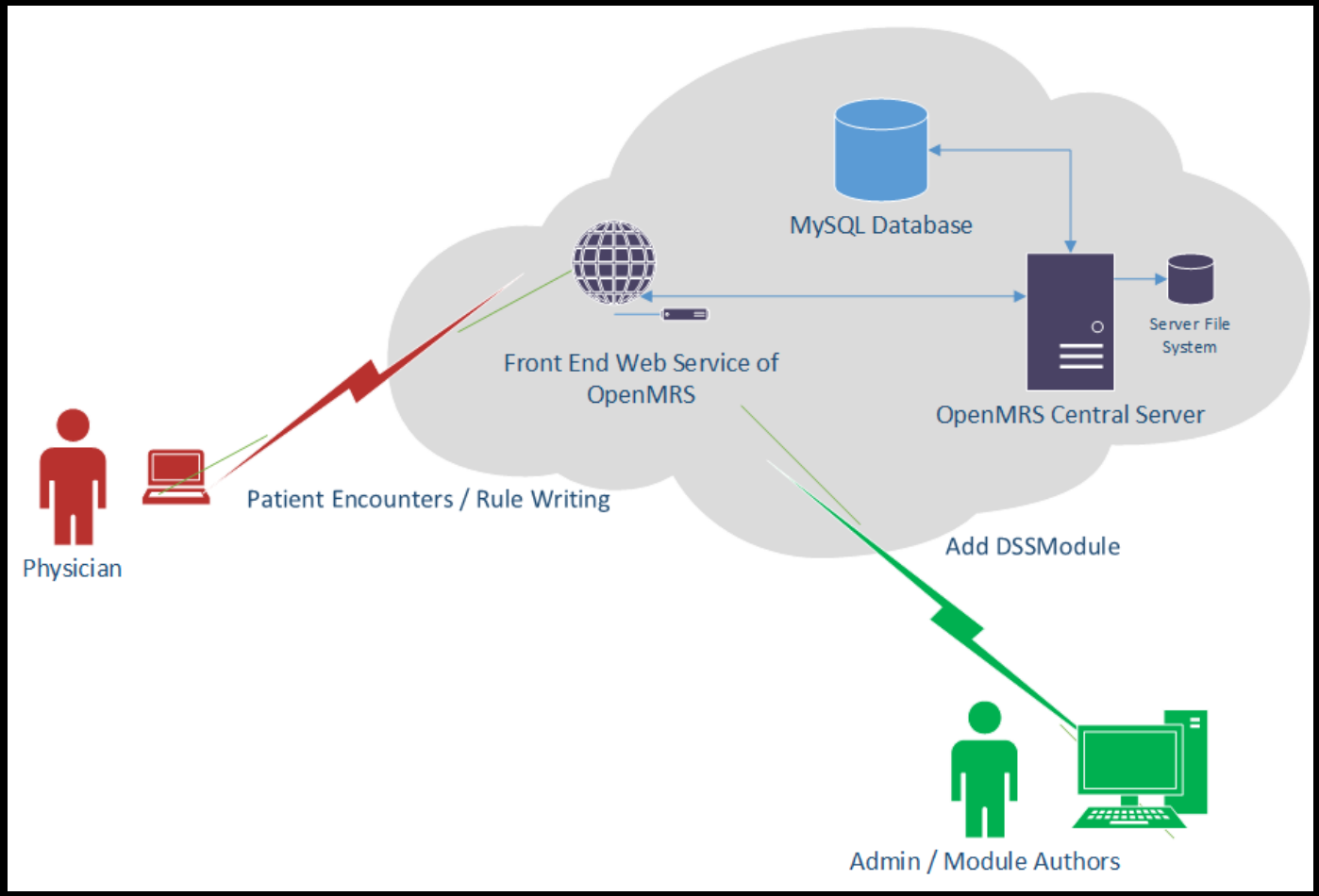
Introduction and Overview

- Physicians need not only a repository of information but also assistance in efficiently processing that information.
- Decision support systems help analyze data in a relevant fashion
- By creating a “rule” based DSS where physicians themselves (and others) can write these rules in a simplified manner allows effective use of DSS
- Integrated into OpenMRS to allow access to patient data and simplified messaging in the unified system

Architecture Use Case Overview

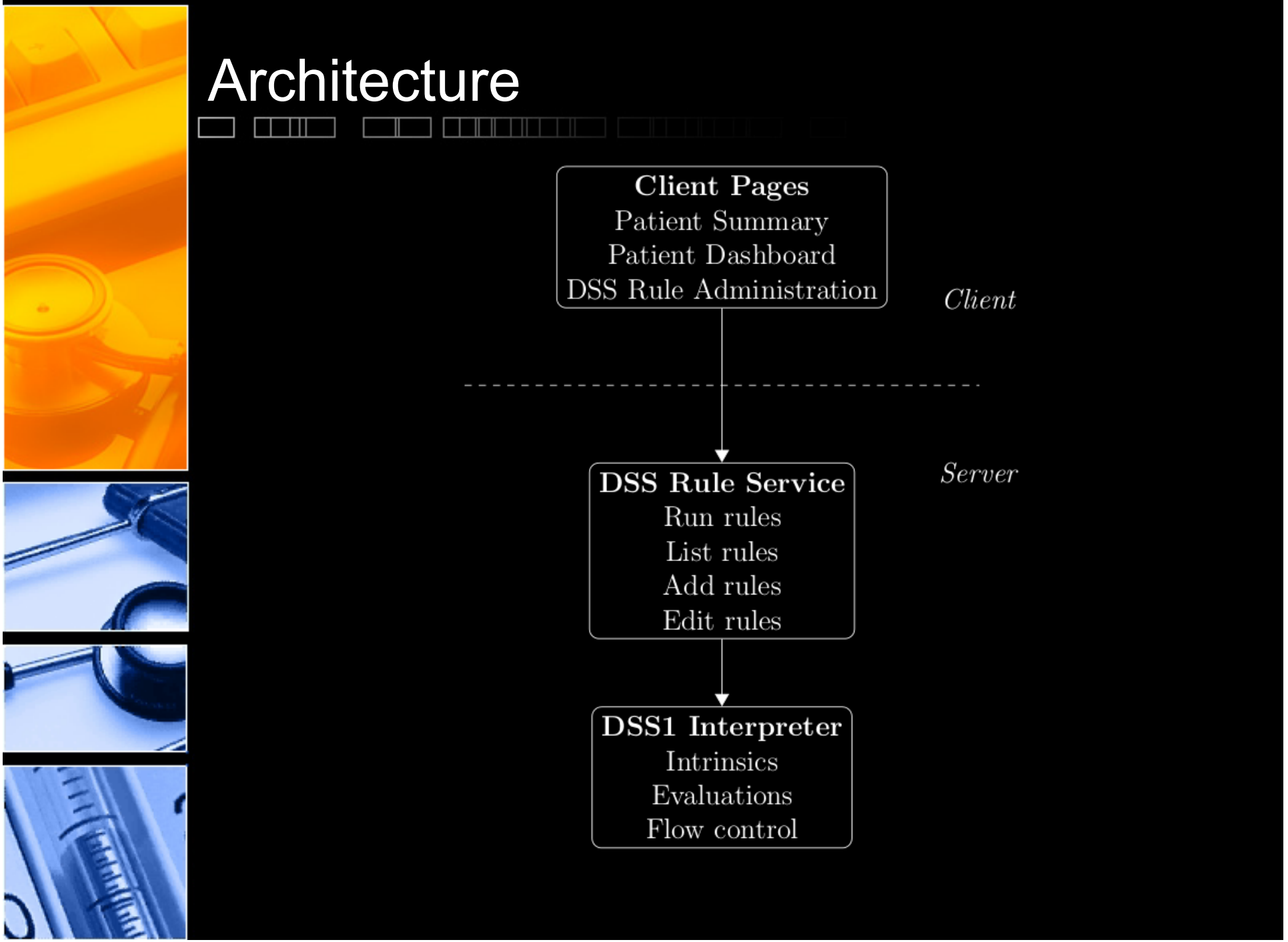


Typical Use Cases

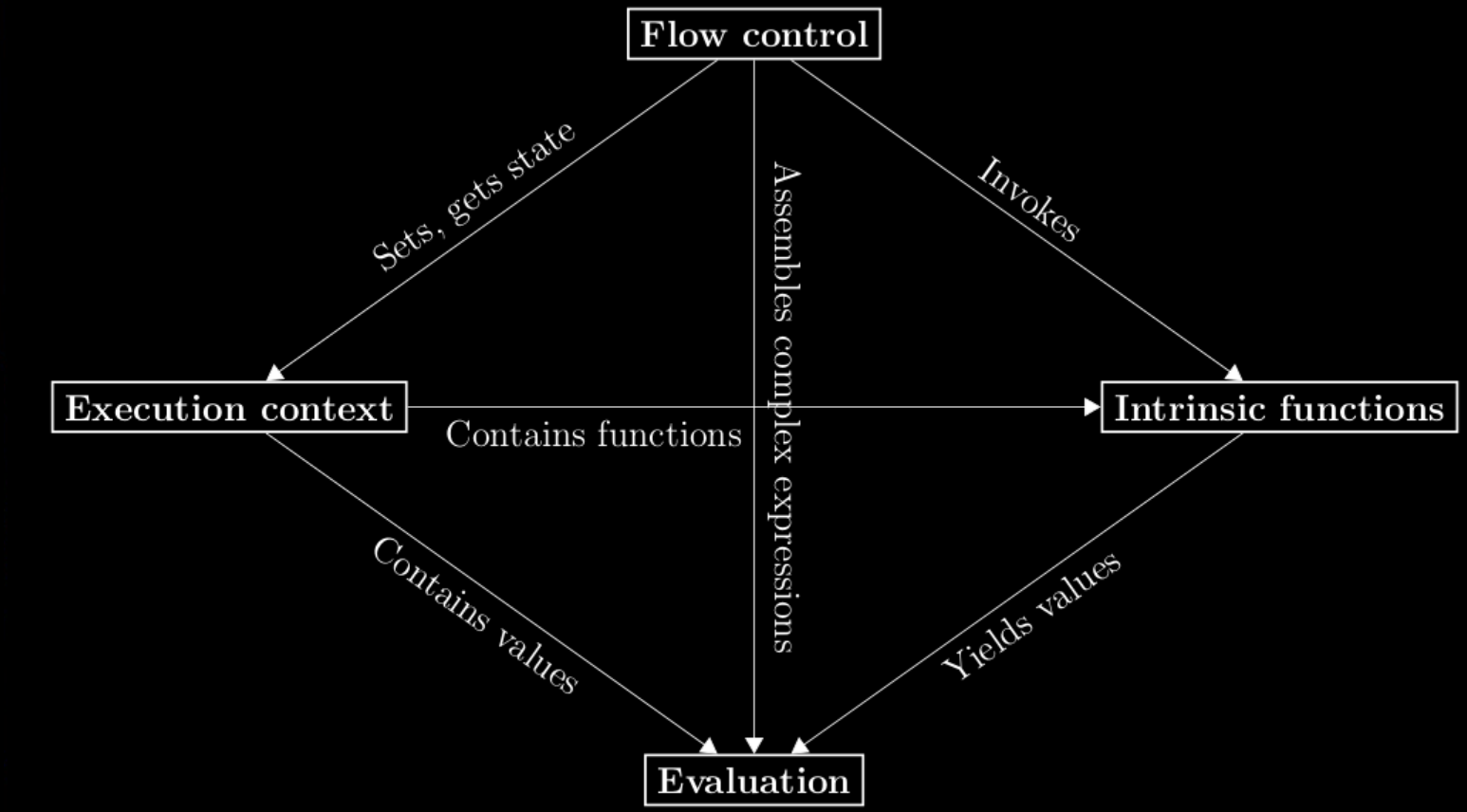
- Creating Rules for:
  - Drug Interactions
  - Abnormal Test Results
  - Significant changes in vitals between encounters
  - Patient reminders

Demo

Architecture



Architecture



Development

- We had a diverse set of tools to complete the DSS within OpenMRS
  - Most work was done in Netbeans
  - Most coding was in Java (at various levels of sophistication)
  - Javascript/JSP
  - XML
  - Spring Framework
  - SVN
- We also had to deal with and work around (mainly for documentation) each of us having different operating systems

Overcoming Issues

- Schedules & Communications
  - We all had different schedules & Locations
  - This led to issues with dependencies and communication
    - We would meet after class
    - Several times in the Computer Lab (2-3 hours each time)
    - Communicate via Email
    - Met over the Web with Web Conferencing

Overcoming Issues

- Skills & Teamwork
  - We had some assumptions in skills including Annotations, UML, JSP, and learning OpenMRS that proved to be in issue in some initial mismatches of assignments
  - By better matching skills to assignments and cooperative teamwork we were able to maintain a better work flow, have a smother code integration and deal with the dependencies.
  - Utilizing LaTeX allowed us to more readily integrate our documentation even when submitted near the deadline

Conclusion

- The Decision Support System provides a simplified language for allowing rule creation
- Rules allow data to be transformed into information
- By working together as a team and supporting each other we were able to overcome impediments and complete the project.
- Future work on the DSS for openMRS would include the assignment of rules to specific concerns and the management (deleting, disabling, etc.) of rules

Q & A