Open MRS – DSS Coding & Alerts



5/15/13



Group 1 Members

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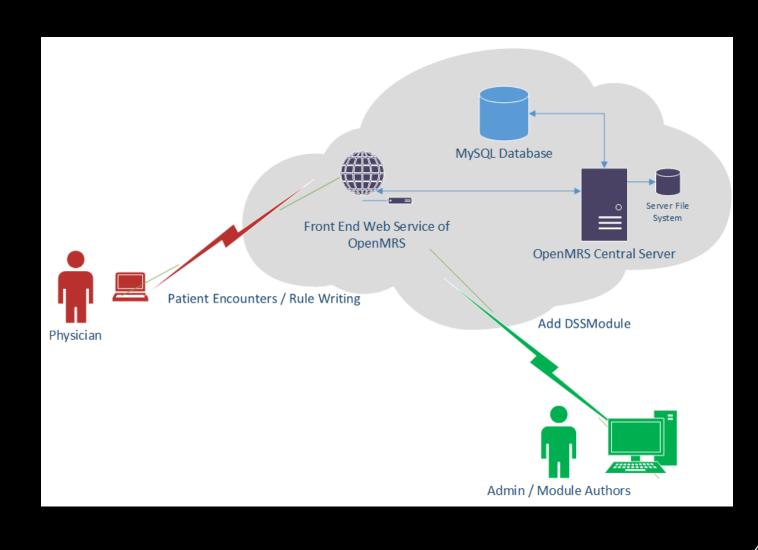




- Physicians need not only a repository of information but also assistance in efficiently processing that information.
- Decision support systems help analyze data in a relevant fashion
- By creating a "rule" based DSS where physicians themselves (and others) can write these rules in a simplified manner 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

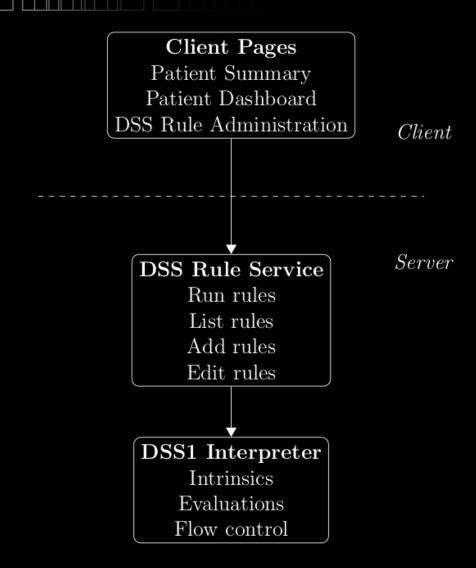
- Creating Rules for:
 - Drug Interactions
 - Abnormal Test Results
 - Significant changes in vitals between encounters
 - Patient reminders

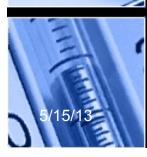


Demo



Architecture





Architecture Flow control Assembles complex expressions Execution context Contains functions Contains values Yields values Evaluation

Intrinsic functions



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





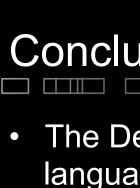
Overcoming Issues

- 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