Architecture constraints

1. Database technology: MySQL

2. Programming paradigm: Object-Oriented

3. Programming language: Java

4. Development platform: Java-EE 7

5. System architecture: Java-EE

6. Architectural frameworks: JSF, Java Persistence API

7. Architectural pattern: MVC, Layered (Multi-tiered)

8. Development technologies: EJB, JSP, JPQL, JDBC, Java EE,HTML,AJAX,CSS,JS

9. IDE: Netbeans

10. Build environment: Apache Maven 3

11. Web server software: GlassFish 4.0 server

12. Protocols: HTTP,HTTPS,FTP,JSON,LDAP

13. Client web browser: Internet explorer 9+, Google Chrome 30+, Mozilla

FireFox 20+, Opera, Safari

14. Client device operating systems: Windows, OS X, Linux

15. Source control management: Git

16 Text encoding: UTF-8

System architecture

Layered reference architure will be used as it is enfored in the JAVA-EE framework

Time Constraint

Given 2 weeks for the functional requiremts ,1 week for the architectural requirements,4 weeks for the implementaion of the system and 1 week for testing.

Web services

REST acess chanel will be used as is more lighweight and doesn require a lot of bandwith,this ehances the goal of one of the core quality requirements which is accesibility to many students ,thus they can acces via phone device web browsers with easy .

Enviromental Constraints

The system will be deployed at the University of Pretoria computer scinces server as an improvemt to the current discussion board system.

Authenticantions

LDAP will be used for login authentication as the system is constraint to the university of Pretoria Students and already the Department have been using LDAP.

Database Technology

MySQL will be used as it ehnances scalability , is open sourece ,thus will not cost university that much and have features for security that includes serilization,encrpyting of passwords ,hashing and many more which can be implemted for strengthing security to the system.