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| Patterns | Specification |
| Publish-subscribe | The system components need to communicate with each other  for example:  When new event occur such as new project/ homework to notify the student or when a change in the subject syllabus happens, the lecturer, head of department and the dean shall be notified.  List based publish subscriber: student who registered in a subject.  Content based: for department head master and the dean. |
| Model view controller |  |
| SOA | We will use number of services that are offered by AAU service provider and our system need to communicate without any detailed knowledge of their implementation.  The tactic that will be used to insure the interoperability is tailored interface.  Asynchronous connectors will be used in conjunction  With the publish-subscribe pattern. |
| Layered pattern | We will use this pattern to achieve low coupling and high modifiability |
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|  |  |
|  |  |

Software elements:

1. Front end
2. Back end
3. Connection

https