

CSCI927 Service-Oriented Software Engineering (Project Proposal)

Online study lounge system based on SOA

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Design:

Our goal is to build a software system integrating GTD, Q&A, record and virtual study room modules, which aims to assist students in their study.

We generally divide our system into four modules — Personal, Study, Social and Q&A. Each module contains functional services, which are based on some basic service. We list some must-have services and good-to-have services.

Must-have services

- User profile service: User can edit profiles. They can fetch various personal data.
- Report service: User or Administer can fetch data report through this service. Feed flows are also generated in this service.
- Attendance service: User can record their attendance in study room service.
- Push service: Subscriber can subscribe to certain events, Pusher push notification to subscriber.
- Follow service: Follower automatically subscribe to followed topics or users.
- Message Service: User can send message privately to each other, this is based on push service.
- Calendar service: User can create their learning calendar.
- Task service: User can add/delete/modify learning task. It notify users through push services. Task report can be generated through report service.
- Network disk service: User manage learning materials with online disk based on permission.
- Self-study room service: User create online study room. It can interact with Calendar services and Task service.
- Search Service: User can search for other user, study room, material, question, answer based on input data type and keyword.
- Question Service: User can add/modify/remove questions with several topics/tags. Questions can also be followed through follow service.
- Answer Service: Users can add/modify/remove their answers and comment/vote other users' answers.

Good-to-have services

- Log service: system automatically generate logs.
- Friend service: User can build/remove friend relation with other user.
- Dynamic service: User can watch friends' dynamics.
- Data service: Service provider can analyse big data to generate data analysis report.
- Course service: Course creator create/update/delete/submit/withdraw courses taking. Course participants join courses/learning timing/summarize learning results/grade the course/view learning progress/course summary/evaluation. System automatically rank courses.
- Book service: Book participants join book reading/learning timing/summarize learning results/grade the book/view learning progress/book summary/evaluation. System automatically rank books.

Techniques

TODO

Appendix

Project Title: Online study lounge system based on SOA

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