Data Flow diagram:

Observing from the figure <Use case2.jpg> we see that there are three end users of this system and they have various different tasks and functions depending on their role.

Most educational institute has the same three role in their institution, they are: Student/Parents, Teachers and Admins.

Students and Teachers firstly have to register themselves to the system of their educational institute’s Simple-cademy and after admin of the educational institute verifies them they can proceed to login to their accounts. Every account has a dashboard depending on their role which shows various information about their account. Once logged in users can see and utilize other functionalities of the system such as the moodle, chatting application, noticeboard feedback system and the voting mechanism.

Only the institute admin can perform higher authority tasks and the admin rights can be shared with teachers on decision of the admins.

Implementation:

This system helps the educational institute to manage the study materials and other tasks that would be often difficult otherwise. This platform brings the school and the student a bit more closer with its various functions. To develop this system the tools that are used are Angular and Firebase.

With the help of Angular all the client-side and partial back end functions are developed. Angular is a web framework that lets one build web applications extending the functions provided by Javascript into typescript and works by binding view in html, methods in typescript, styling in css, and packages in node together to create a seamless platform.

For the main back-end the Firebase is used, its real-time database and file storage service known as firestore is used to manage the data send and requested by the angular application at the front-end. Firebase provides with robust back-end services that completely merge with the front-end and provides best basis for any web application. The moodle of the simpe-cademy is possible because of the firebase+angular package present, known as ‘angulafire’ that carries out the tasks of merging corresponding functions of the angular webframe work to the firebase services provided.

The seamless integration of firebase and angular is also possible because of the use of the JSON data format which is also a human readable data format and extremely extensible and easy modified. Firebase real-time database and angular communicate with each other using the json file and therefore provide very rich data for usability while keeping the program highly customizable for future changes

Hardware/software

RAM: 4GB+

intel i3 and later