Research Content Management

Nithin Reddy Kumbham, Vamsidhar Reddy, Sai Vivek Reddy Kusukuntla, Gopi Krishna Kandimalla, Abhinav Bellamkonda, Jawahar Reddy Nomula

Under the supervision of Dr. Ratan Lal

**Abstract.** Research is an ever growing study involving identifying and working on the problem and finally finding an appropriate solution or advanced solution for the existing one. The work being done in the background involves a lot of work and skill. If above problem is the primary task for people who are working on research and the secondary problem is storing them appropriately in database using some sort of technology and retrieving them for future use. In this paper we further discuss how research papers can be stored and retrieved for future use using software website and database to store papers physically.

**1 Introduction**

Research is a boom topic, and it is increasing day-by-day involving many people to come forward and work on new problem or existing one and create an efficient solution. The work carried behind is immersive and involve lot of time. If above part is the primary part for any individual working on research, then storing the research work done in appropriate server for ease of access and modifying their work later on when moving forward. Research Content Management is a website where individuals can store and retrieve stored papers in a single go creating ease of access by using search techniques and adding comments for specific papers creating a reference point. The main backbone of Research Content Management is React JS library and firebase for storing user data and papers in server with individual account.

**2 Related Work**

Research Content Management is designed for researchers for storing user data and research papers which they worked on. It is mainly a website with React JS acting as backbone in the front and Firebase for storing user data in the cloud server. The website is designed with ease where it involves registering an account for storing user data, storing research papers with adding title, date, topic, research area so that the added paper will be unique and can be retrieved easily using appropriate search techniques by using above provided data. The retrieved paper can be viewed with ease and future reference comments can be added.

**3 Components in Research Content Management**

Research Content Management is designed and implemented in such a way that it contains blocks which act as components in React JS and together combined makes a full website. The blocks involve

* Register
* Login
* Dashboard
* Upload
* Search
* View

**3.1 Register**

For the use of Research Content Management one needs to register for the website and for the ease of use RCM has an option to register using manual fill up of data i.e., Name, Email, and password. The other option for registering is through Google. If one has a valid google account saved in his local machine, he/she can register at a glance using the above mentioned feature. The authentication which firebase provides has requirements which need to be met.

**3.2 Login**

Once user had successfully created/registered an account he/she can login to website using the provided email address and password. User can login with Google account as the option of registering using Google is provided during registration. If the user had forgotten his/her password the website provides an option for forgot password link where the user will be getting a link to reset the password when user enters email address which he used during registration.

**3.3 Dashboard**

Once user had logged in successfully the user can see a dashboard at the top where the dashboard consists of website name to the left and to the right user can see his name, email address and logout button to the right. This dashboard gives user a quick glance of his/her details. The dashboard component is designed in such a way that it contains upload and search feature for the website.

**3.4 Upload**

Upload feature makes a user to upload a research paper on which he is currently working or previous research papers which he/she worked on. For making the uploaded paper unique there are several factors taken into consideration. The paper which user wants to upload should be of pdf format, should choose a topic for the paper, year of publishing for the paper, title of the paper, and finally technique of the paper by choosing above metrics the paper will be unique with all the papers which are previously uploaded or the papers which are being uploaded in the future. And when user clicks on submit button the data which is entered is directly uploaded to the firebase server which later can be accessed.

**3.5 Search**

Search component is used to search a particular paper from list of papers in list which user had uploaded into database. Whenever search link is clicked on dashboard initially all the papers being uploaded is displayed as list with columns title of paper, year, topic, technique, view pdf button to view the paper. At the top of list there is a search button where user can search the paper using topic, year, title, and technique. Effective search technique is used to filter out particular paper using keyword search.

**3.6 View**

View component is used to view a particular paper when view pdf button is clicked. When view pdf button is clicked the paper is displayed to the left and comment section box will be displayed to the right. If the user wants to add comments for respective paper he/she needs to enter the comment in comment box and click on post comment then the comment for the paper will be stored in database with timestamp. When user clicks on show comments button the comments which are posted for the paper is displayed as list with the timestamp.