QUESTION ANSWERING SYSTEM (QA) ON THE BASIS OF CROWD SOURCING

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ABSTRACT

Nowadays, people use the internet to find the answer, mostly community question answering (CQA) sites used for finding the solution. However, social media is becoming more popular, that's why people are ignoring the Community question answering site (CQA). Therefore, we are creating a website which is "Question answering system on the basis of CrowdSourcing". This project aims to find and develop the solution or overcome the unanswered question issue. By using crowdsourcing platform the task could easily be done by humans.

Keyword: - *Crowdsourcing, knowledge sharing, QA system.*

1. INTRODUCTION

Search engines, social media and network creates complications but CQA will provide the most relevant answer. CrowdSourcing is the act of getting ideas, information from a group of people. Similar to a "suggestion box". QA system is developed to overcome the problem of unanswered question. The aim of this project is to combine human thinking and knowledge sharing for limited community.

Increasing number of questioners in CQA and the few accounts providing answers, has led to an increase in unanswered questions. The results of a research done on Yahoo! Answers show that 15 percent of all English questions, have remained unanswered and that 25 percent of the questions in each category are repetitious[1].

Further, the percentage of unanswered questions in Persian is higher, due to the shortage of Persian content on the internet. As Social Media becomes more popular, people prefer asking their questions on these networks instead of CQAs, because of the benefits these networks provide [2].

Therefore, they are unable to benefit from the advantages CQAs offer. Automatic QA systems are developed to overcome the unanswered questions issue. An automatic QA system is a system which produces a suitable answer for the received question and present it to the questioner. Building such systems requires using complicated Information Retrieval (IR) algorithms and Natural Language processing. However, solving tasks such as translation, linguistic tagging, and visual interpretation is too hard for these Artificial Intelligence (AI) techniques. Therefore,

using Crowdsourcing which has become a popular way to solve problems that are too hard for today's AI techniques is advised [3].

These tasks could easily be done by humans using Crowdsourcing platforms. Using crowdsourcing increases scalability due to assigning tasks to crowd. The purpose of this paper is to combine strong human capability to understand and conclude with computer science algorithms, and propose an open model for a QA system based on crowdsourcing, in order to solve above-mentioned problems and deficiencies. The main purpose of this model is to provide answers to questions, which in crowdsourcing platform, the process is divided into smaller steps and is done by the applicants. The process could be accelerated, if a financial reward is offered to the applicant who completes the task. The model includes different sub-systems such as recommending question to qualified workers sub-system, automatic answer producing sub-system and question receiver sub-system which receives questions from several sources e.g. Telegram and Twitter. These sub-systems provide a platform for developing a QA system based on crowdsourcing. The remainder of the paper is organized as follows. The next Section reviews the literature. Section 3 describes QA process based on crowdsourcing and presents architecture of the proposed system. The model deployment and the experimental results are discussed in Section 4. Finally, Section 5 concludes the paper.
Nowadays, technological advances and the development of AI algorithms has helped humans to solve tasks such as finding the shortest path between two points or identifying spams. However, solving some tasks are still a great challenge. For instance, sometimes the traditional data mining techniques are too time-consuming, inflexible, and unscalable and their implementation is expensive. Using crowdsourcing, unlike traditional techniques, you could manage data more efficiently and extract favorite patterns from dataset [4].

Crowdsourcing term, first was coined in 2005 by Jeff Howe and Mark Robinson at Wired magazine. The term is the constructed using two words, "Crowd" and "Outsourcing". Crowdsourcing is outsourcing work to the crowd by an open call. Crowdsourcing is used in different fields. There has been much research regarding translation using crowdsourcing. For instance, study [5]

2. METHODOLOGY

In this project, we have to overcome the problem of existing QA on the basis of crowd sourcing with limited community concept and give permission to only authorized user to answer the question. Unauthorized user are able to only read or access knowledge from the QA system.The purpose of this model is to provide knowledge sharing and question answering based on crowdsourcing for the authorized user and find best solution of the question.
First of all starting the QA system, there is login option for both guest users and private users. Private users is nothing but registered user and Guest user is anyone who can ask their question to the QA system. Guest user and private user ask the question to the QA system. The question is stored in the database, after that administrator analyse that question if the question is invalid then it's send message to the users else question is valid then it is forwarded to the next process (to the crowd workers).Crowd workers then give the answers according to the question. All answers stored in the database, after that administrator analyse that answer on the basis of rating and review. Amongst all the answers given, one having the highest rating has given the priority at the topmost of the answers. And rest of the answers arranged accordingly on the basis of rating. Thus we get lot of answers and knowledge related to our question.

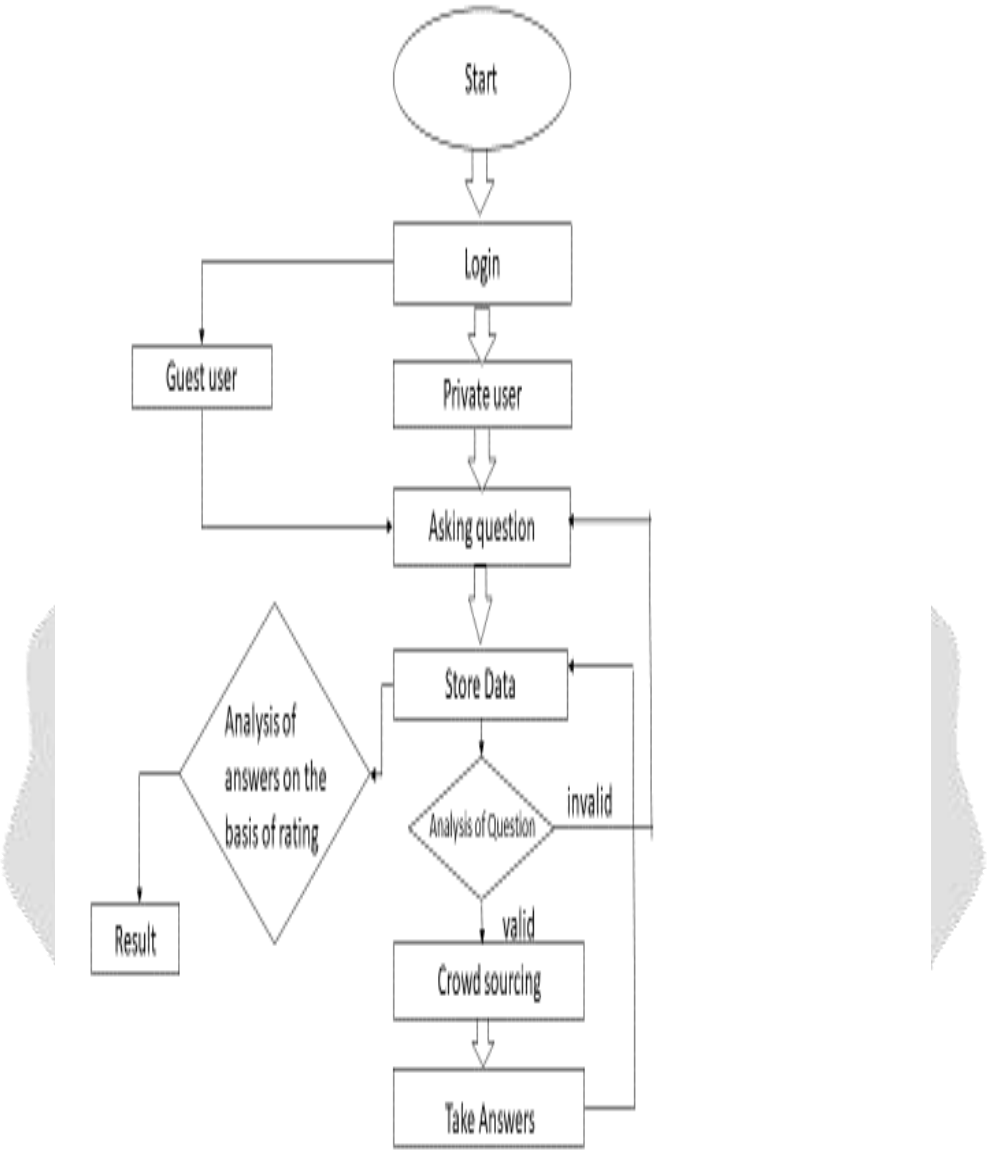

Fig.1 Work flow diagram of QA System

3. RESULT

Login Page: - Login page is for both private (registered) user and guest user, a registered user can enter his username and password. If user is new then he can click on new user after which registration page opens.

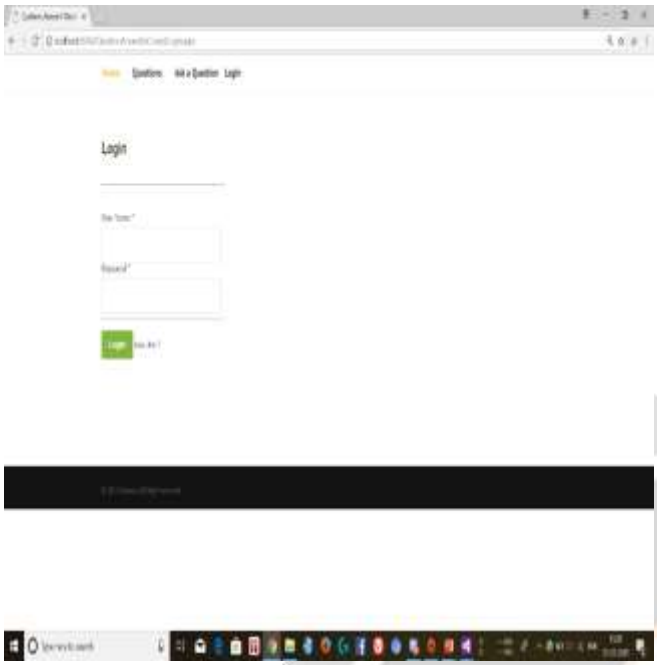

Fig1. Login Page

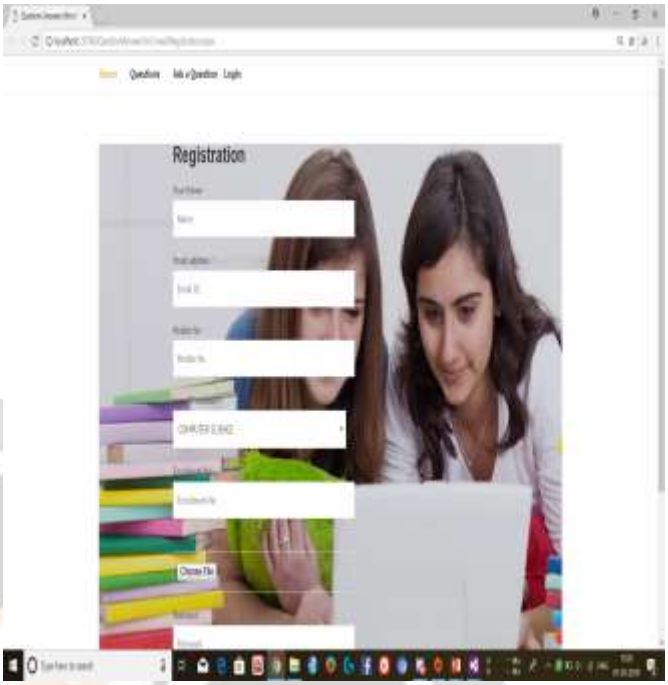

Fig 2. Registration Page

Registration page: - In this registration page, user has to enter their personal information. For authorized user, user have to choose file. For example- degree and for guest user it is optional field.

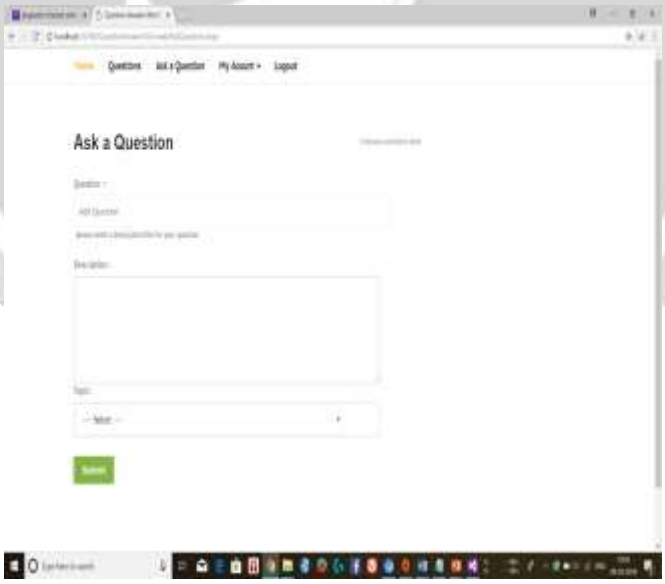

Fig 3. Ask a Question Page

Ask a Question Page:- In this page, user can ask a question which starts with "wh"-word and end with question mark. Also, user has to enter description about asked question,for example-" What is dbms?" so user has to enter technical words such as definition, and can ask whatever he desires, and user also has to select the topic related to question and can submit a question on clicking to submit button.

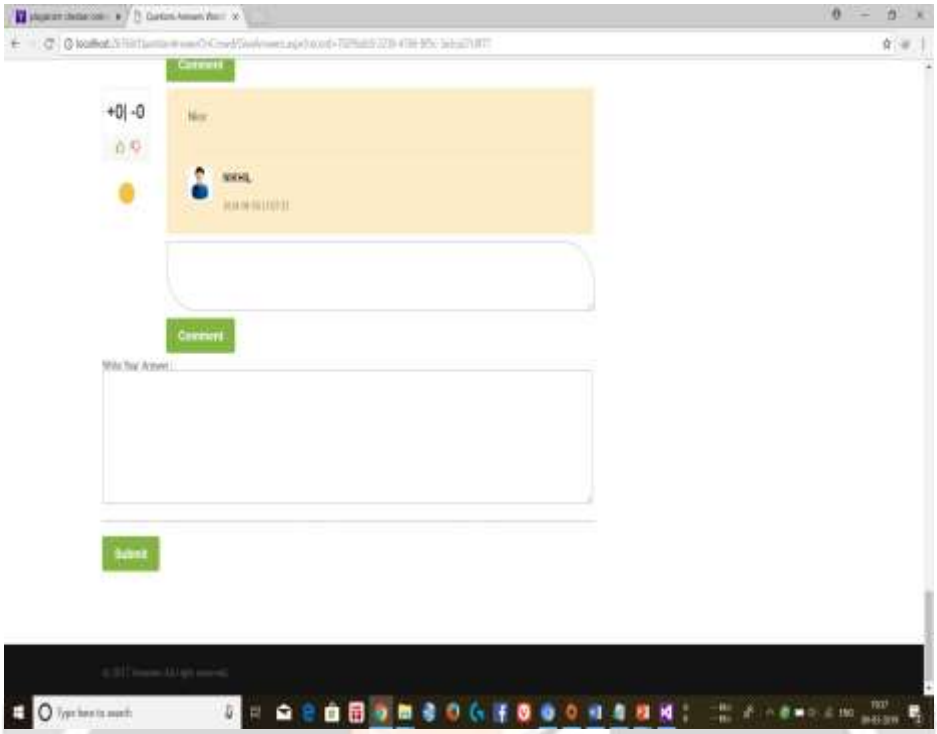

Fig 4. Answer Page

Answer Page :- In answer page, user give the answer of that particular question which is displayed on home page and also give the ratings or like for that answer. Here comment section is also present if user has some doubts. Then, user can submit the answer on clicking to submit button.

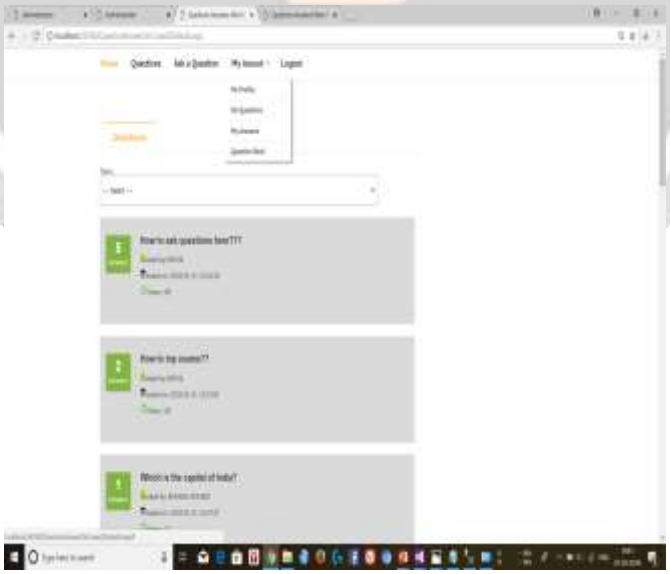

Fig 5. My Account Page

My Account Page: - My Account has four fields My Profile, My Questions, Question Bank. In My profile, user can view his own personal details. In My question user can view his own asked question, In My Answers user can see

his own answers. In question bank, user can view his own question if he want to add new question he can add a question (ask a question page) and that question is also shown in question bank.

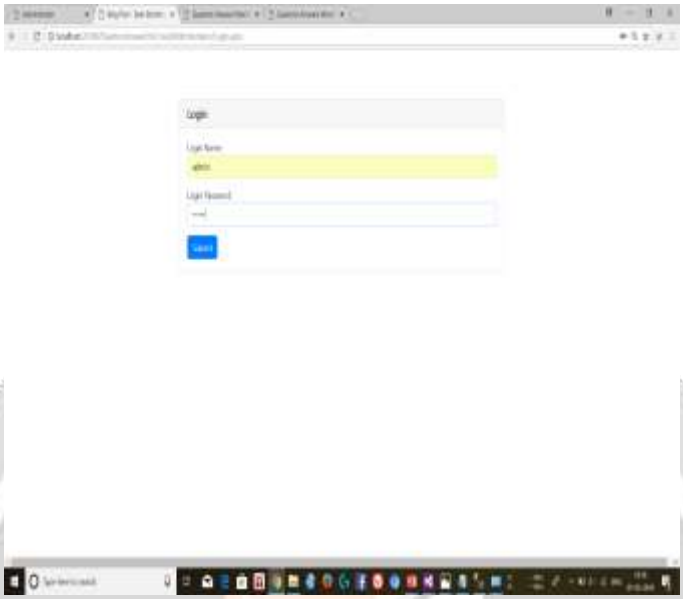

Fig 6. Admin login Page

Admin login Page:- In admin login page admin can login to this to manage all the process. We are creating a separate page for admin login so that the information and work of admin should be secured.

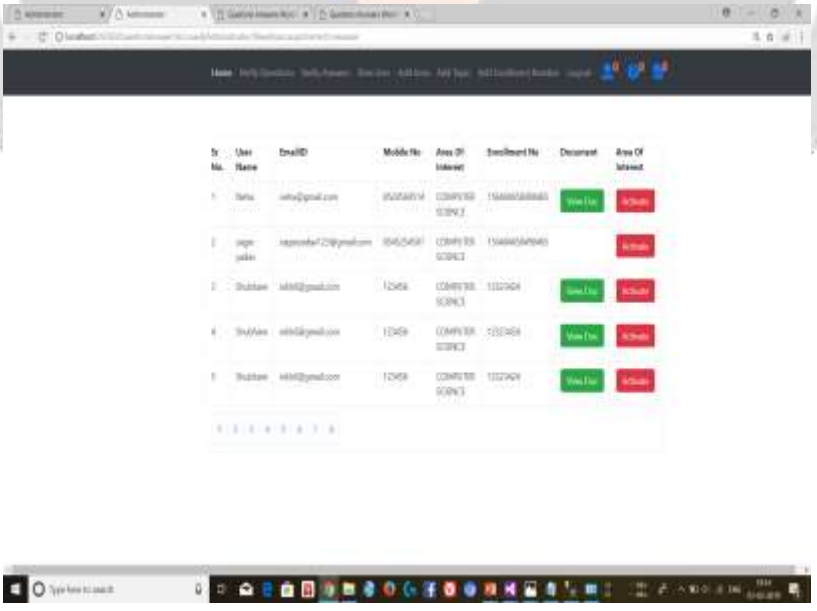

Fig 7. Admin Page

Admin Page :- In admin page, where fields such as name of users, area of interest, enrollment number and also shows how many users are enrolled, active or inactive.

4. CONCLUSIONS

This project attempts to overcome the challenges which are faced in existing work, by using the concept of crowdsourcing platform we combine the human concept, share knowledge and give best solution to the user.

5. REFERENCES

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