| **2022 Girl Hackathon Design Doc Round: Project Submission** |
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| Project Name: Query\_Collector |
| Group Name: <we3\_web\_weavers> |
| Group Members: Amisha Raje, Mamta Kanwar, Sampreety Pillai |
| **Brief summary**  Lack of organized study resources and deficiency in reliable authorities for doubt-clearing sessions are common problems faced by students today in their late teens. Our project aims to solve this issue among students aged 15-20 years by providing a formal platform that can be adopted by all kinds of educational institutions to clear students' doubts and provide them with quality study material. Students can create an account on our website and have access to previous year's question papers, books, and question banks all in one place. They can also ask their queries in an official manner to their very own subject teachers who teach in their institutes, all of which are properly recorded and will be visible to everyone else maintaining the anonymity of the student. |
| **Problem statement**  Our problem statement is a subtheme of "hybrid education". It targets students in the age group of 15-20 years who are serious about their academia. It addresses problems faced by students which occur due to a mismatch in the functioning of an educational institute and the actual learning process of a student.  Firstly, a very common problem students face is that their queries related to the subject matter at hand, forever remain, unsolved. There are no formal platforms offered by institutions wherein questions asked by students are recorded and also made available for the use of other students.  Secondly, many students do not have access to relevant quality questions. Either they are unable to find the required resources, or, do not understand how to choose among the baffling number of practice problems the internet provides. An organized, clear path needs to be set out in front of students for sufficient practice to take place.  These two issues form the backdrop of our project statement . Thus, we aim to solve the problems created by:  (a) lack of organized study resources  (b)deficiency in reliable authorities for doubt-clearing sessions |
| **Use cases**   1. User: A student studying in an institute which has adopted our system.   Scenario: The students can register once and then log in to our system using their credentials. Once logged in, they can look for past year question papers for the particular course they are taking in that institute. They can also look for books to study from. They can ask questions to their teachers for specific subjects and get a question ID. Their will be a separate question bank page, where all students can view their queries answered all in one place and can get their own with the help of their ID numbers. If the question remains unanswered they can contact their teachers separately with the ID number as proof. Students will also have a separate option to contact us as and when required.   1. User: A professor teaching in an institute which has adopted our system.   Scenario: Teachers cannot register themselves in the system to prevent fake accounts. Their account must already be made by the institution. Teachers can view queries from other students and answer the question from their particular subjects with the help of the question bank available. Teachers can also contact us whenever required.  **Use case model** |
| **Design and Approach**  Programming languages and files used:   1. HTML 2. CSS 3. Javascript 4. Bootstrap 5. PHP 6. Other minor files used for small functionality/ storage purposes: csv files, txt files etcetera.   Other technologies used for hosting website:   1. Github: Stores all the programming files/ data files/ pdf. Contains all our code. 2. Heroku App: Was used for hosting our website on the internet. Accesses all of the code from Github.   Upon entry:   1. Index page: It is the first page our viewers see which gives information about our website.It will further take users to the Login Page and Registration Page. It also contains a link a to the contact us page:    1. Registration Page: Students users can register here.Teacher, have an account in the system by default.   Details like the user’s name, password and courses are taken and stored.   * 1. Login page: Both teachers and students can access this page. Their details will be checked and if correct leads to the User Home Page, else does not accept invalid users.   2. Contact-Us page: Refers users to a page wherein they can enter their own contact details along with their query to enable us to solve their problems.      1. Home Page:   (For Students)  Displays users profile details and gives links to PYQ page, Books Page, Question Banks page, Doubts Page and Contact-Us page.   * 1. PYQ Page:   This refers student users to Past year Question Papers which have been used in their course by their institute. The questions will be categorized clearly and user can choose which question paper they want according to their convenience.   * 1. Books Page:   Here also, the page will be clearly categorized into sections wherein the  textbooks currently in use and the recommended textbooks are decided by the institute and their teachers.   * 1. Question Bank Page: This is a collection of questions from all students which can be viewed by every other student. The identity of the student who asked the question is hidden. Every question will also have a unique ID. Teacher contact details will also be provided if the student wants to pursue the question.   2. Doubts Page: This is the page where students submit their questions and tell which subject they want to refer it to.   (For Teachers)  Displays Teacher details and gives links to Question Bank Page which is editable for the teacher. It also provides a link for the Contact-Us Page. Upon entering the answers to a particular solution, the solutions will be available for viewing for all students.    Other features that can be added in the future:   1. A google extension that pings the students when one of their questions has been answered or if a new question from a specific topic has been answered. 2. Question storage and selection features that lets the user save whichever questions they like in different folders. 3. Adding latex and code support to make the doubt portal more inclusive of the requirements in different subjects. Different packages can be made according to the subject requirements.   Rollout strategy:   1. Objective 1: To implement the system among different group of students, like college clubs for a few months.   Participants: Us( the development team) and members of the club.  Action taken:   1. The team leaders/ seniors help in solving queries from the newcomers. They will act as the “teachers” and the newcomers who want to learn are the “students”. 2. Observations will be taken as to how well the system works and if there are any other features that can be added to the website specialized to their particular topic or simply in general. 3. Objective 2: To implement the system in a larger group of students, such as all the members of a particular class along with some teachers.   Participants: Us, members of the classroom and the teachers.  Action taken:   1. Teachers and students will make an account in our system and try to work with the college/school/other course. 2. Observations will be taken about what problems arise when projects are done on a large scale. If the project works fast enough and if keeping track of large number of students is proper. 3. Adding an extra page wherein different groups of people who have used our system can give their reviews.   C. Objective 3: Making the project official. |
| **Alternative Approach and Ideas**   1. A portal to keep track of all the various scholarships/ upcoming exams/ internships that a student can participate in. Filters out results on the basis of qualifications criteria and also gives details about all the prerequisite knowledge. Details of certain awardees from your institute who agree to provide their contact details for public use 2. A specialized system for one subject such as mathematics/ computer science and keeping it open for everyone to discuss and solve problems. |
| **Reference and Appendices**   1. <https://github.com/> 2. <https://www.w3schools.com/> 3. <https://www.youtube.com/> 4. <https://stackoverflow.com/> 5. <https://artofproblemsolving.com/> 6. <https://www.geeksforgeeks.org/> 7. <https://dashboard.heroku.com/apps> 8. VS code 9. Xampp |