DroidRush 2k20

Problem Statements

(B.tech 2nd and 3rd year, MCA 1st and 2nd year)

Rules and Regulations:-

Before you start developing awesome android apps, have a look at the rules and regulations so that you don't end up with disqualification.

1. This is a team event of maximum 3 members. You can still work individually if you want. Team members can be from any branch.
The only prerequisite is that at-least one member of the team should be from the CS/IT branch.
2. You have to build a working Android app for any one problem before the deadline. You can contact seniors for any discrepancies/doubts in the problem statement.
3. You'll be required to submit an abstract before submitting a solution, in which you will describe the approach to the problem and any external libraries used.
4. The decision of the judges will be final and binding.
5. This is a cumulative scores event. So you need to perform well in all rounds to win.
6. You are encouraged to use any platform to build your application. Native as well as Hybrid platforms can be used(PWAs are not allowed).
7. ANY FORM OF CODE PLAGIARISM WILL NOT BE TOLERATED. If any part of the project is found copied the team will be disqualified immediately.
8. For any problems, queries, questions, or help at any stage, contact seniors or reach out to peers.

Some Tips:-

1. Focus on making the application user friendly. Backend is important, but so is the User Interface.

2. The main motive of DroidRush 2k20 is to help you to develop interest in android development and make you equipped with a skill that you can use lifelong to solve real life problems.

3. **The Basic/Advanced features are to guide you on your theme**.**You are free to add more features from your side which would enhance the quality of the app**. You would be judged on your creativity, functionality of your app, User Interface, user-friendliness etc.

4. **Note for first-time developers/beginners** : Your focus should be to complete the project in the given time.

All the best!!

File sharing app

With the advent of self reliant India, there is a need for app devs to build a file sharing app that is completely made in India.

Basic Features:
1. Show all the apps and files in the app.
2. Local Connection between 2 devices(using WiFi related technologies)
3. Share txt, png, jpeg files.
4. QR code scanning for file sharing b/w two devices

Advanced Features:
1. Share large files such as videos.
2. Adding more file extensions for sharing.
3. File sharing in a group containing more than two individuals.
4. Encrypting files.
5. Cross platform file sharing.

Grocery App

The main aim of the problem statement is to build a solution that connects a user to the hyperlocal market for buying essentials.

Basic Features:
1. Authenticating a user(buyer and seller) and creating a profile for users.
2. Product listing for every seller in respective category and sub-category.
3. Add the product to the wishlist and cart feature.
4. Add rating and review option for the purchased product(should be editable by the user).

Advanced Features:
1. Notification for order status and offers.
2. Search in different categories.
3. Loading items on Demand(Lazy Loading).
4. Subscription option for a particular product on daily/n-day basis.(Auto schedule the booking of item)

Gullak Expense Manager

This problem statement is basically based on tracking expenditure and helping the user monitor his payment activities.

Basic Features:
1. Create User Profile.
2. Add a transaction object having transaction amount, date, sender/ receiver, title, category.
3. Payback option.
4. Show how much you owe and others owe you(list of pending transactions).
5. Edit and delete a previous transaction.
6. Create a Group of people.
7. Simplify debts in groups.
8. Comment on transaction.
9. Graphs charts and useful statistics(Monthly, weekly and yearly expenditure, etc.)

Advanced Features:
1. Online and offline support.
2. Search transaction.
3. Auto transaction category.
4. Add transaction payment mode (for payments other than cash record the transaction id considering multiple payment channels are available to you and they return the transaction id and success/ failure of the payment).
5. In case of failure show failed payment transaction id.

Reference can be taken from Splitwise app

Learning Media

This problem statement focuses on developing a community of learners.

Basic features:

1. User can register on the app and choose his topics of interest (These may be modified later)
2. Users can post articles which may contain image, text, gif, video/audio embedded.
3. Users can upvote/downvote and comment on any article.
4. User can edit or delete only his/her post but admins can do it for all the posts.
5. Count views on every article.

Advanced features:

1. Posting an article on the platform should have a rich text form editor(includes bold,italic forms etc).
2. Articles can be bookmarked as well as shared to different platforms.
3. Any article by user should pass through admin for permission (if admin denies permission, it won't get posted).
4. Sorting of shown posts according to date of posting, upvotes etc.
5. Users should be able to view profiles of other users.
6. Loading articles on Demand(Lazy Loading).
7. Try implementing the 'follow' feature. If a user follows another user, he/she must get that user's articles in his or her feed.

App to reference can be Medium.com

Quiz App

As there are no midsems, there will be quizzes organised by various faculties. The student data needs to be in the college itself so there is a need to build our own app where quizzes can be hosted and graded.

Basic Features:
1. Two different portals for hosting tests(for faculties) and giving tests(for students).
2. Profile for each user(both teacher and student). Users can register/login/update their profiles through the app.
3. Appearance of the quiz for registered subjects by the student.
4. Profile of each user shows Statistics like number of tests given, score history, average score in each subject.
5. Show quiz timer.

Advanced Features:
1. Timer for each test and auto submit at the end of the test.
2. Feature for reviewing a question later if the user wants to come back to some questions.
3. The submission must be in encrypted form.
4. Represent user statistics through interactive graphs and charts.
5. Auto evaluate result and generate PDF for teacher.

The Game App

This is an open theme in which you are supposed to make a game that can have the following features:-

Basic Features:
1. Local Multiplayer Hosting with 2 players(on Same Network).
2. Using an android in-house API like View.
3. Beautiful and Smooth UI.

Advanced Features:
1. Online Multiplayer Game hosting.
2. Use of Game Engines like unity,unreal,etc.
3. Split Game screen to view opponent's board/view.

Travel Manager

This problem statement focuses on solving the problems that every traveller faces when they visit a new place.

Basic features:

1. Maintain a static list of all the information one would need to know about a city.
2. List famous tourist spots of each city.
3. Display pictures and weather conditions of each destination.
4. Maintain a "My Trips" section which contains all your past trips.
5. "My Trips" section can contain: - experiences, total cost of the trip, photos, etc.
6. Use Google map to locate the destination and find routes.

Advanced features:

1. All the data about the destinations must be dynamic i.e. use some API or web scraping.
2. Use GPS to automatically detect your locations and recommend places near you.
3. Maintain a profile section, so that the user can login into any device and access his data.
4. Create a section for "Upcoming trips" under "My trips" section where you can plan your upcoming trips.
5. "Upcoming trips" sections can contain the itinerary i.e. list of places to visit, plan of travel, route, total budget, things to carry, etc.
6. Make the "My trip" section shareable, so that one can share his travel experience and travel itinerary to others.

Video Calling/Conferencing app

The aim of the problem statement is to build an app to maintain the connectivity among individuals even being distance apart.

Basic Features:
1. User Authentication and profile of user(may contain name, avatar)
2. Video call including two persons.
3. Users can chat with each other during the video call.
4. Switch between audio and video between 2 individuals.

Advanced Features:
1. Manage permission on entry of user to the video call(allow all/ask every time)
2. Switch between audio and video for all the people in video call.
3. Video call involving more than 2 people.
4. Chat between two individuals and chat with all the people on call.
5. Any User can present their screen to other users present in the call.

Open Theme

This problem statement requires you to brainstorm and come up with ideas that can help the sectors that are affected by covid-19 like restaurants, tourism, hotels, supply chain, etc. You have to come up with a robust money making business solutions for the underlying problem to help the society. A business model for the app will be appreciated.

For any queries, contact:

MNNIT CC Queries official (DroidRush Channel on MS Teams)
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