DROIDRUSH

2018

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.
2. You have to build a working Android app for **any one problem** before the deadline.
3. You'll be required to submit an abstract before submitting solution, in which you will describe the approach to the problem and any external libraries used. The last date for abstractsubmission will be communicated later.
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. Information regarding various rounds will be communicated later.
6. **NO FORM OF CODE PLAGIARISM WILL BE TOLERATED**. If any part of the project is found copied, the team will be disqualified from DroidRush. Take it seriously.
7. Overuse of APIs is not encouraged. It might result in loss of marks.
8. For any problems, queries, questions, or help at any stage, post it on [Android MNNIT](#)
   a. Facebook group or contact your seniors. Asking help doesn't mean that you ask each
   b. and everything regarding the project or its core functionalities. Such questions will not
   c. be entertained. Contacts of co-ordinators are available on the last page.
9. Please join [Android MNNIT](#) facebook group to stay updated.

All the best

Some Tips

1. The Problems are divided into 3 categories based on the developer's experience in android development - **Beginner, Intermediate and Advanced** (and **one Open Problem**). The difficulty level doesn't mean that a person choosing a difficult problem will always be ahead of the person choosing an easy problem. However, choosing a difficult topic will give you an edge, provided you are able to achieve what is being asked. So choose wisely!

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

3. The main motive of Droidrush 2017 is to help you to develop interest in android development and at the same time give to an opportunity to develop an awesome project. So don't think you cannot do it! Even if you are unable to complete the application you can still present it on the final day and continue the application after Avishkar.

4. The Basic/Advanced features are to guide you on your topic. 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.

Let the best app win !!!

Beginner

SEARCH MY PHONE

If you want to search for anything in the mobile, you need to go to the individual application and search what you want. How about an app that provides a one stop search bar for anything that you want to search in your phone.

Basic features:

1. Good user interface through which users can search apps, contacts, messages, document files, audios, videos, images.

2. User should be able to open any of the search results.

3. User should be able to sort search results based on various parameters.

Advanced features:

1. Voice search.

2. Suggest search queries based on previous searches.

<u>Beginner</u>

<u>Kumbh Darshan</u>

You'll be spending few years in Allahabad, let's contribute to the Sangam City. This year **Kumbh Mela** is being hosted at Allahabad, visitors face a huge problem in finding places ,routes ,food, hotels ,etc. Make an app solving the issue and make Kumbh journey hasslefree.

Basic features:

1. Details of Kumbh Mela – be creative and informative
2. Ways to reach Allahabad
3. Places of interest , hotels , food junctions ,etc.
4. Emergency Contacts

Advanced features:

1. Using Google Maps when giving locations.

2. Add complaint/feedback portal – eg. Make a help chat, use gmail/messaging service .

3. Basic bot for customers answering FAQ's.

4. SOS button – in case of emergency.

<u>**Note**</u> **: If your app is good enough, a NGO would be making your app public on app store in this Kumbh itself.** ☺

- **UI will be winning factor here apart from features.**

Intermediate

POCKET MANAGER

Have you ever thought of keeping track of your daily expenses? You must have. How about an app which will make the things simpler for you, an app to manage all your incomes and expenses, an app to keep track of your pocket.

Basic features:

1. Add income and expense.

2. Provide tag or category for each type of income and expenditure.

3. Provide summary of the income and expenses - daily, weekly, monthly, in a given date range.

4. Show interactive graphs for income and expenses.

5. Provide an option to compare expenses in two different time ranges.

6. Search for expenses (include date range, tags as search fields)

Advanced Features-

5. Login through a remote server authentication.

6. Store backup of the data monthly or daily basis on remote server.

7. Download pdf of expense and income summary.

8. In app sharing of expenses and income with friends and family.

Intermediate/Advanced

APTITUDE/TECHNICAL TEST TRAINER

During placement/internship session there is MCQ section (Aptitude, Technical, etc.) in the first round of most of the companies. Many students face problems due to lack of practice. So, the main aims of this app are – (i) anyone can give a test whenever and wherever he wants, (ii) anyone can host a test whenever and wherever he wants.

Basic Features:

1. Two different portals for hosting test and giving test.

2. Profile for each user. Users can register/login/update their profiles through the app.

3. Question papers for different topics (like Arithmetic aptitude, Data interpretation, reasoning, etc.) and sub-topics for the users to choose from.

4. Any user can become a host and upload question papers, which will be visible to everyone.

5. Profile of each user shows Statistics like number of tests given, score history, average score, ranking, etc.

6. Leader board of all the users.

Advanced Features:

1. Timer for each test.

2. Feature for reviewing a question later if user wants to come back to some questions.

3. Difficulty levels for question papers. User can choose the difficulty level of the test.

4. The submission must be in **encrypted** form.

5. Topic wise leader board.

6. Represent user statistics through interactive graphs and charts.

<u>Advanced</u>

<u>TRAVEL BUDDY</u>

Beginner 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.

2. Use GPS to automatically detect your locations and recommend places near you.

3. Maintain a profile section, so that 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.

Bonus: - Any additional feature is much appreciated and will help you gain extra score.

Advanced

SALES TEAM MANAGEMENT

You have to design an app for management of a sales team led by an admin. The admin wants to display all the commodities (and their quantities) present in the inventory currently. This app will have two types of login- Admin and Salesperson. Now as the salespersons will sell a commodity, they will have to make an entry in the app so that the quantity of the commodity sold by the salesperson can be removed from the inventory. Each commodity as a profit (in rupees) associated with it that the firm will have on the sale of the commodity. This app requires a server for storing employees data, commodity data etc. Hence, we recommend **FIREBASE**.

Basic Features-
1. Login and Registration feature for admin and the salespersons with simultaneous data storage on the server.
2. App should display all the commodities present in the inventory currently. It should also have a search capability on all the items that are present in the inventory as well as the sold items.
3. Display basic details of the salespersons e.g. employee name, employee id, profile picture, commodities sold etc.
4. Admin should be able to view the profile of all candidates and a salesperson should be able to see only his profile.
5. There should be a monthly leaderboard of top 10 salespersons.

Advanced Features-
1. There should be a medium for personal communication between all the employees and a medium for global communication among all the employees in the sales team (including the admin).
2. Admin must be able to send notices through the app to all salespersons, which is visible in form of notifications in app.
3. Based on the salesperson's monthly sales, write a recommendation algorithm that sets a sales target for the next month for the salesperson.
4. Use some compression algorithm (predefined) for reducing server data size.
5. Use graph APIs to show a salesperson's progress over time.

Advanced

MNNIT ACADEMIC PORTAL APP

Why do we have only the college website? Why not an App? The aim of this problem is to design an app for the Academic Portal of our college website. This app will contain most of the major features of MNNIT Academic Portal.

Baisc Features:

1. Profile for each student displaying their basic information like name, registration number, DOB, Branch, etc. Students can register/login/update their profiles through the app.

2. Result and Transcript section, which contains the academic record of the student.

3. Fee structure section, Downloads section, and Academic calendar section.

4. Notice section, where notices uploaded by the college will be visible.

5. Special access to Admin to upload notices, approve registration, etc.

Advanced Features:

1. Add "Semester Registration" feature, where students can select slots, select payment mode, etc (NO NEED TO IMPLEMENT TRANSACTION FEATURE).

2. Add notification feature for new notices uploaded by the college.

3. Add feature to send emails through the app to the admin and to any student.

4. Represent student's academic record through interactive graphs and charts.

Open Theme

The theme for this project is **EDUCATION**. You can make anything you want but make sure you stick to the theme. However, you would be required to mention the aims and features of your app in your abstract submission. Also, keep in mind that your submission will be judged on the basis of the quality of the idea that you have implemented and the practical usage of your app.

Contacts

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