Android Application design

The contest will be done over an online platform but the software for Android i.e Android studio won't be able to run over any online platform so we would be sharing the question in form of pdf and the submission will be taken over a private repository that we will be providing to you. The task is fully designed by our team so contestants would not be able to find it on any online platform directly, so we are giving liberty to use any kind of online resource for the reference.
The problem is focused on System Design and UI design skills rather than Android coding as we want to check contestant developing skills, not coding skills.

Contest description

Duration: 3 Days
The contest is divided into two tasks, every contestant has to do both the task to obtain the maximum marks in the contest. Both the task is independent and differ in their domain completely but for an Android developer he must have a perfect blend of both the skills to pursue Android further so the gist of both the task is described as:

Task 1: The first task belongs to the elementary part of Android development but it is considered as the most crucial part. It includes the task from UI domain and a UI is the face of any application so to master this art is necessary. The task checks how competent you are to follow the instructions so you can complete the task with all the expectations.

Points: 50 Points
1. 30 points to follow all the description guidelines.
2. 10 to follow all the important points provided.
3. 10 to pass all the test cases.

Task 2: The second task belongs to the most important task not only by the perspective of Android developer but to be master of any field you need to conquer this skill, the task includes development skill which challenges your language understanding and System designing skills. The task contains a system that you need to design and problem that will generate a clue after solving the problem which will get you to the solution of the final problem. It's a problem that will include your Android as well as your system designing skills.

Points: 100 points
1. 30 points to follow procedure and complete the Android coding task
2. 70 points to decode the right position and get it submitted according to instructions.

Tip: If you have issues regarding any of the task or for the review and discussion you can contact us directly or hop into our discord server
Link to Discord server:**https://bit.ly/Android_discord**

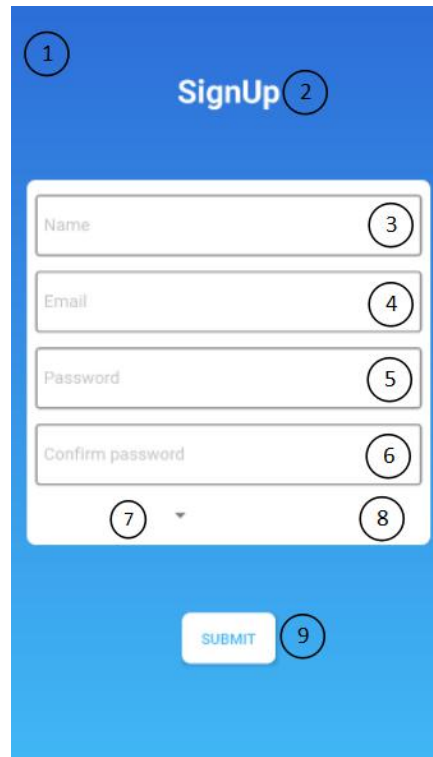# Task 1   Total Marks : 50

Title: UI design

Objective: You have to design a UI for the sign up page for the application using constraint layout, the design should be as per the given picture.

| Picture A | Picture B |
| (Output Image) | (Description Image) |

Description(30 points)
(Refer to Image B and description of individual element according to number is given below)

1. The background is a gradient with start color= #40B7F4 and end color = #2C6DD7

2. A text view with text "Sign Up"
   Properties: Top margin = 64dp, Left=Right=0dp, Bottom = No margin

3. It is a "TextInputLayout" which contains a edit text in it with the hint as shown
   Properties: Top margin = Left margin = Right margin = 8dp, No bottom margin

4,5,6 are similar to 3, only the text hint is changed according to picture

7. It is a spinner with empty text
   Properties: Top = Left = Bottom Margin =8dp and no right margin

8. A card view with white background and round corners as 8 dp, it consist of a constraint layout which consist of all (3,4,5,6,7) elements.
   Properties: Top margin = 64dp, Right margin = Left margin = 16dp

9. A submit button with text and round background of 16 dp
   Properties: Top margin = 64 dp, No left, right , bottom margin

Important points (10 points):
1. The layout should be Constraint layout.
2. The gradient should be made with a separate XML in a drawable folder.
3. The round corner of button 9 should be done through the drawable file.
4. Text Input Layout is a special type in material components (Research and explore on your own).

Testing (10 points):
1. It will be tested on three devices in Android studio (Pixel 2, Nexus 10 Tablet, and 1080p television)
2. The layout should be consistent on all the three devices i.e there should be no complication such as cutting off a view or a text or anything on three devices.

Title: Coffee ordering application

Objective: Design a coffee ordering application that has the following feature and descriptions given below.

Procedure (30 points)

The contestant should initially think over the feature that an application should have, once they are clear with their mindset that how any system works they can follow the description and the feature given below to complete their application with minimum features.It is important to include at least every feature mentioned and if a contestant thinks they can add additional useful features they are free to do so but keep in mind adding too many features will only add to the complexity of the system, so avoid unnecessary features we want only a basic application.It would be better if you focus more on preventing a fail case or exploit to any feature that would scale you additional points.Some point you should consider

1. The UI should be done using a constraint layout with minimum complications.
2. The code should be readable and properly documented with the help of comments
3. Explain every complex logical or computational step with the help of comments

Description (70 points)

The application is very basic and focuses on your system design skills so we are providing a minimum feature list with a short description that we expect in the application:

1. A field to enter user name who is ordering a coffee
2. A field to enter the address where the coffee needs to delivered
3. A field/s that take date and time to deliver coffee
4. A field to choose among the types of coffee restaurant offers
5. A field to enter the quantity of coffee
6. A filed that shows the total cost of the order including fixed delivery charges.
7. A way to send this order in textual form from Whatsapp to restaurant number if the user does not have the Whatsapp installed in his phone then the order should be done over Email to the restaurant email id.

Restaurant Details

Name: Coffeeccino
Contact number: +91 9636579852
Email: abhi935235@gmail.com
Coffee menu

Name	Price (in $)
Cappuccino	2
Espresso	3
Affogato	3
Double espresso	4
Freakshake	5
Iced Latte	5
Latte Macchiato	5
Irish coffee	10
Iced Mocha	8

Delivery charges
If the total cost of the order is less than 10 $ then 5 $ additional delivery charges else no delivery charges
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Instruction

1. You will not be judged for UI in this task but it should be decent enough and responsive such that every element of your UI is accessible on any device otherwise you will lose points.
2. Your application should be fully functional preventing any incorrect input and exploit.