NAGARRO CLP 2017
PLACEMENT IONIC APPLICATION

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Requirements

- Create mobile application, that can be used for managing student, companies and registering students for a placement event in an institute.
- For UI, the application will use Ionic framework.
- For web services, the application will use the NodeJs web services created earlier.
- The server application should expose following API's
    - Add, Remove and Edit for 'Student' in the college.
    - Register and Unregister of 'Company' for the placement event in the college.
    - Register and Unregister a 'Student' for a 'Company' in the college.
- Above API's should be completed in all respect including calling backend API.

Additional Requirements

- Deploy on Android device
- Implement validation on the UI side – make sure that invalid inputs are not allowed to be entered from the UI.

Steps

1. Installing Ionic.
2. Getting source code.
3. Compiling code.
4. Running on browser.
5. Running on an android device.

Step 1

Installing Ionic

Prerequisite

1. Make sure you have node and npm setup on your machine

Install Ionic

1. Open command prompt
2. Run following command > npm install -g cordova ionic
3. This will install Cordova and Ionic framework on your machine.

Step 2

Getting source code

Source code is hosted at https://github.com/Kartik1607/Placement-API/

1. Open command prompt
2. Navigate to directory where you would like to clone the repository.

○ For example, to navigate to E:\Nagarro


```
C:\WINDOWS\system32\cmd.exe

Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Kartik>E:

E:\>md Nagarro

E:\>cd Nagarro

E:\Nagarro>
```

3. Clone the repository by using git command.
   ○ If git is not installed, download zip from github and extract to the directory.


```
E:\Nagarro>git clone https://github.com/Kartik1607/Placement-API
Cloning into 'Placement-API'...
remote: Counting objects: 2675, done.
remote: Compressing objects: 100% (54/54), done.
remote: Total 2675 (delta 1), reused 30 (delta 0), pack-reused 2620
Receiving objects: 100% (2675/2675), 5.26 MiB | 484.00 KiB/s, done.
Resolving deltas: 100% (625/625), done.

E:\Nagarro>_
```
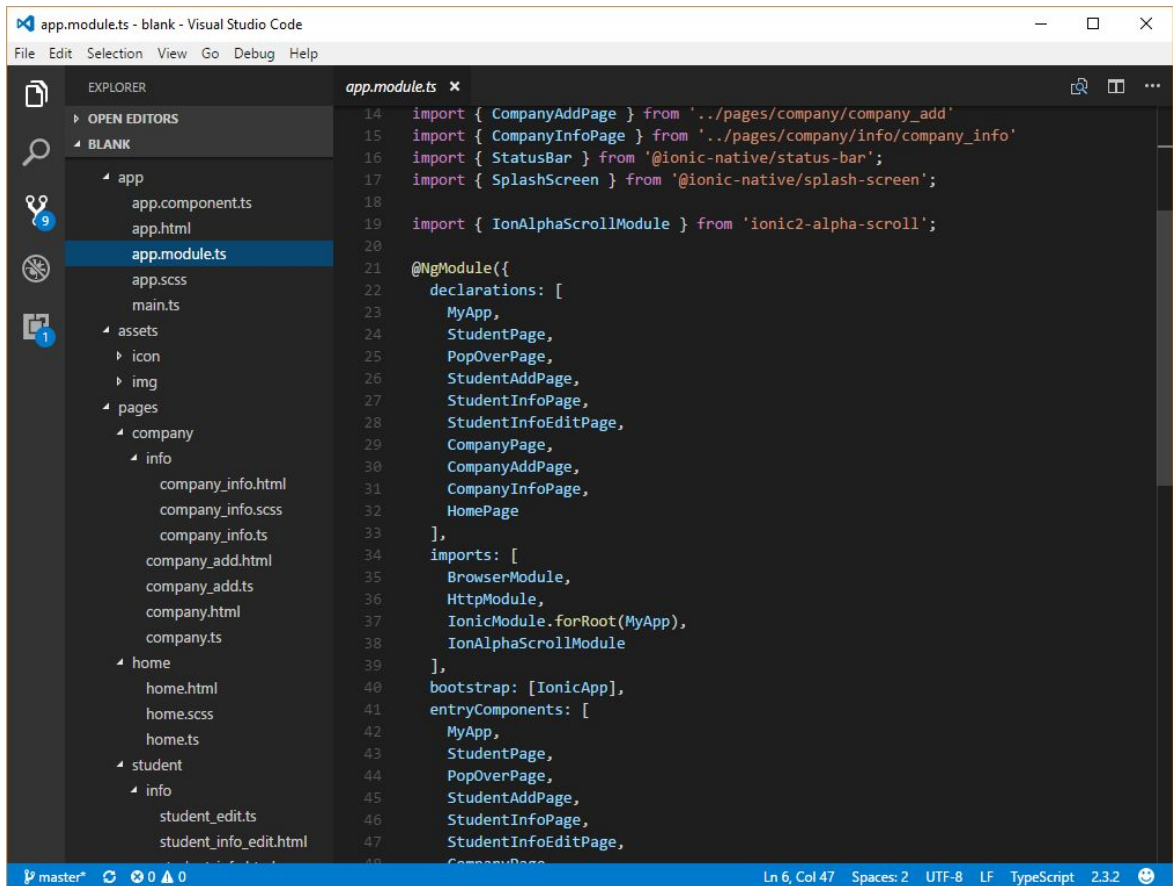
   ○ Directory after cloning
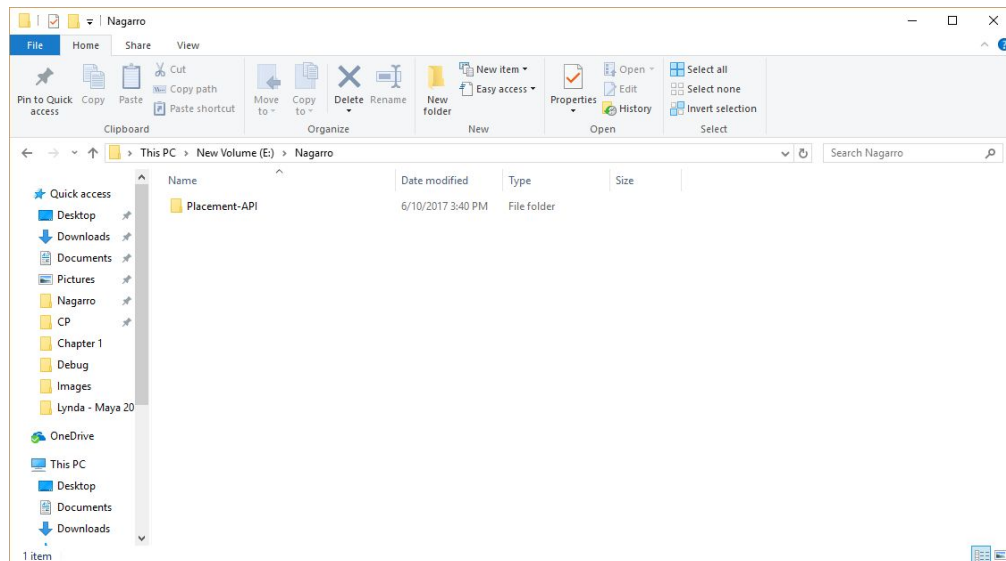
4. Code is available inside Placement-API/frontend/blank. Navigate to the folder.
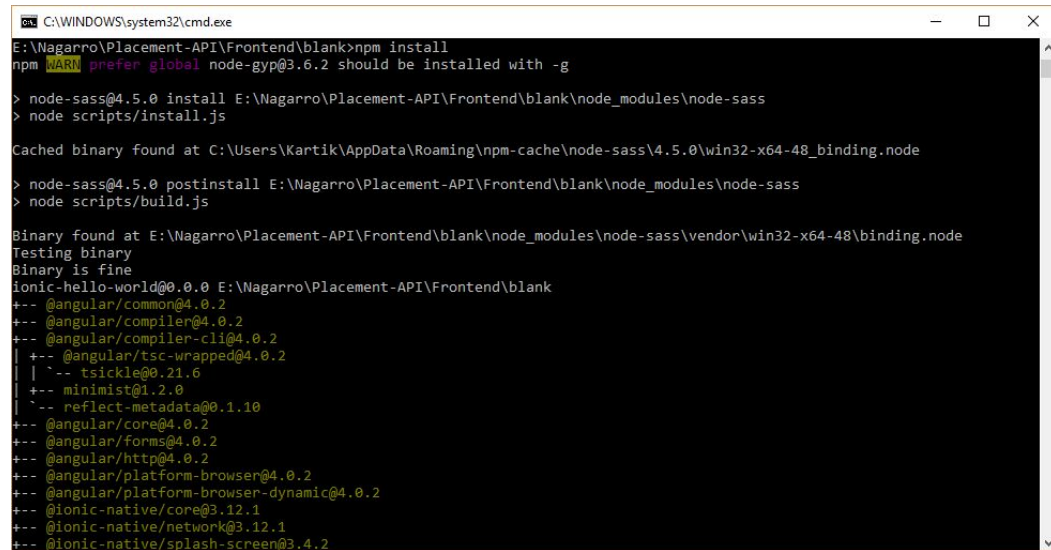
```
E:\Nagarro>cd Placement-API\Frontend\blank

E:\Nagarro\Placement-API\Frontend\blank>
```

5. Main source code is present in src subdirectory, which can be opened in any modern IDE. eg : Visual Studio Code

Compiling code and running on browser.

1. Install npm modules. On command prompt, navigate to directory and enter command
   - npm install

```
C:\WINDOWS\system32\cmd.exe                                                    —    □    ×

E:\Nagarro\Placement-API\Frontend\blank>npm install
npm WARN prefer global node-gyp@3.6.2 should be installed with -g

> node-sass@4.5.0 install E:\Nagarro\Placement-API\Frontend\blank\node_modules\node-sass
> node scripts/install.js

Cached binary found at C:\Users\Kartik\AppData\Roaming\npm-cache\node-sass\4.5.0\win32-x64-48_binding.node

> node-sass@4.5.0 postinstall E:\Nagarro\Placement-API\Frontend\blank\node_modules\node-sass
> node scripts/build.js

Binary found at E:\Nagarro\Placement-API\Frontend\blank\node_modules\node-sass\vendor\win32-x64-48\binding.node
Testing binary
Binary is fine
ionic-hello-world@0.0.0 E:\Nagarro\Placement-API\Frontend\blank
+-- @angular/common@4.0.2
+-- @angular/compiler@4.0.2
+-- @angular/compiler-cli@4.0.2
| +-- @angular/tsc-wrapped@4.0.2
| | `-- tsickle@0.21.6
| +-- minimist@1.2.0
| `-- reflect-metadata@0.1.10
+-- @angular/core@4.0.2
+-- @angular/forms@4.0.2
+-- @angular/http@4.0.2
+-- @angular/platform-browser@4.0.2
+-- @angular/platform-browser-dynamic@4.0.2
+-- @ionic-native/core@3.12.1
+-- @ionic-native/network@3.12.1
+-- @ionic-native/splash-screen@3.4.2
```
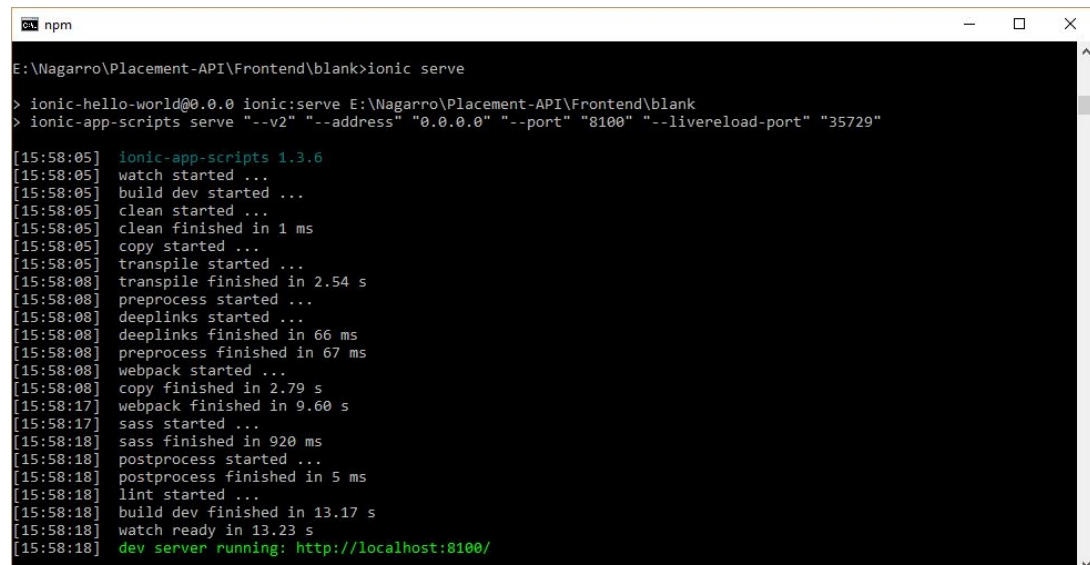
2. To compile and run application, on command prompt type
   - Ionic serve

```
npm                                                                            —    □    ×

E:\Nagarro\Placement-API\Frontend\blank>ionic serve

> ionic-hello-world@0.0.0 ionic:serve E:\Nagarro\Placement-API\Frontend\blank
> ionic-app-scripts serve "--v2" "--address" "0.0.0.0" "--port" "8100" "--livereload-port" "35729"

[15:58:05]  ionic-app-scripts 1.3.6
[15:58:05]  watch started ...
[15:58:05]  build dev started ...
[15:58:05]  clean started ...
[15:58:05]  clean finished in 1 ms
[15:58:05]  copy started ...
[15:58:05]  transpile started ...
[15:58:08]  transpile finished in 2.54 s
[15:58:08]  preprocess started ...
[15:58:08]  deeplinks started ...
[15:58:08]  deeplinks finished in 66 ms
[15:58:08]  preprocess finished in 67 ms
[15:58:08]  webpack started ...
[15:58:08]  copy finished in 2.79 s
[15:58:17]  webpack finished in 9.60 s
[15:58:17]  sass started ...
[15:58:18]  sass finished in 920 ms
[15:58:18]  postprocess started ...
[15:58:18]  postprocess finished in 5 ms
[15:58:18]  lint started ...
[15:58:18]  build dev finished in 13.17 s
[15:58:18]  watch ready in 13.23 s
[15:58:18]  dev server running: http://localhost:8100/
```
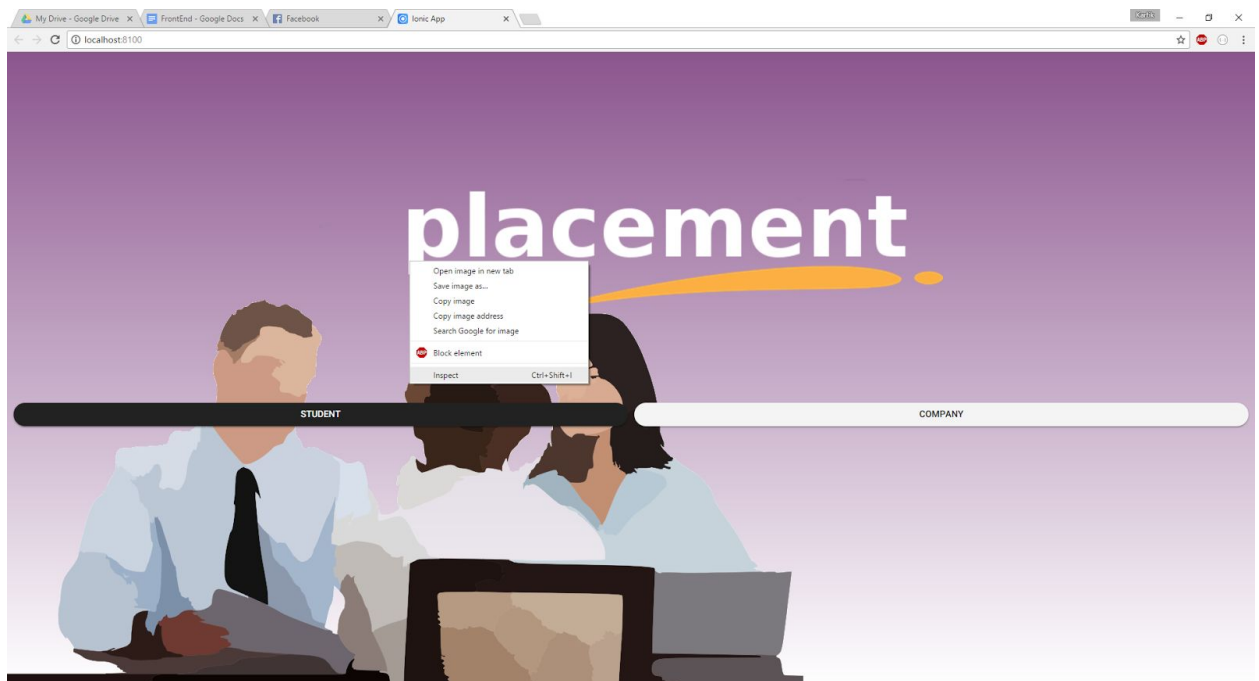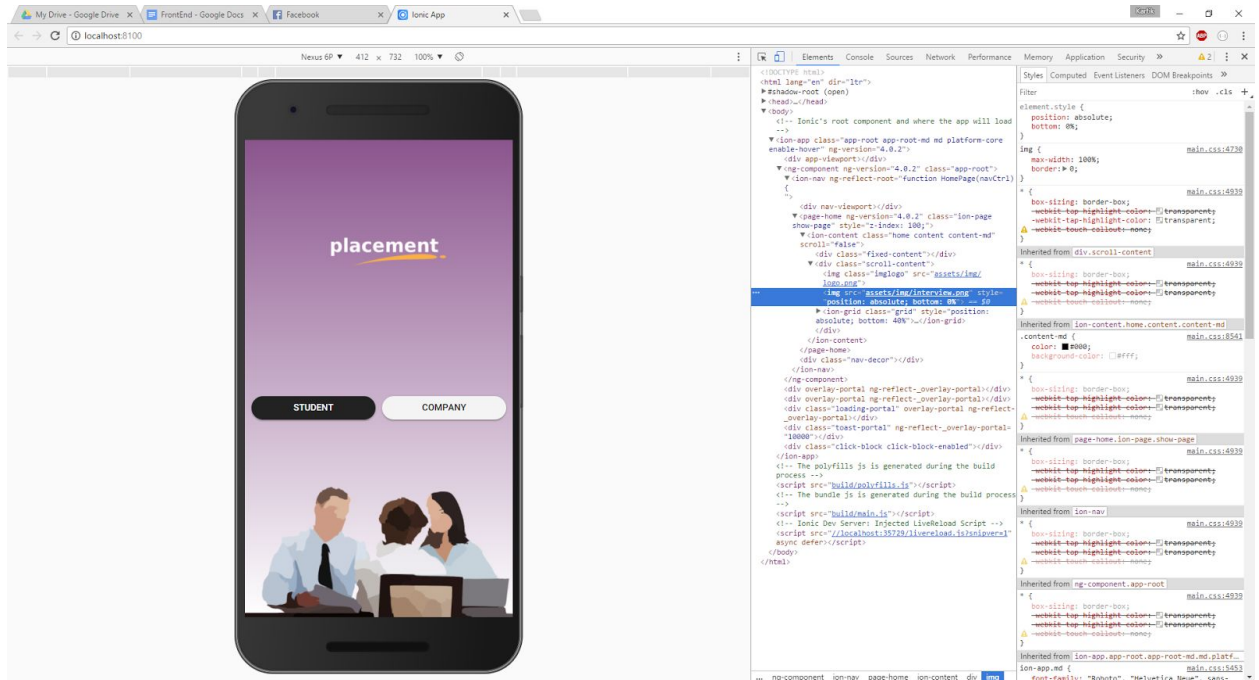
3. Currently application runs in fullscreen at localhost:8080 port
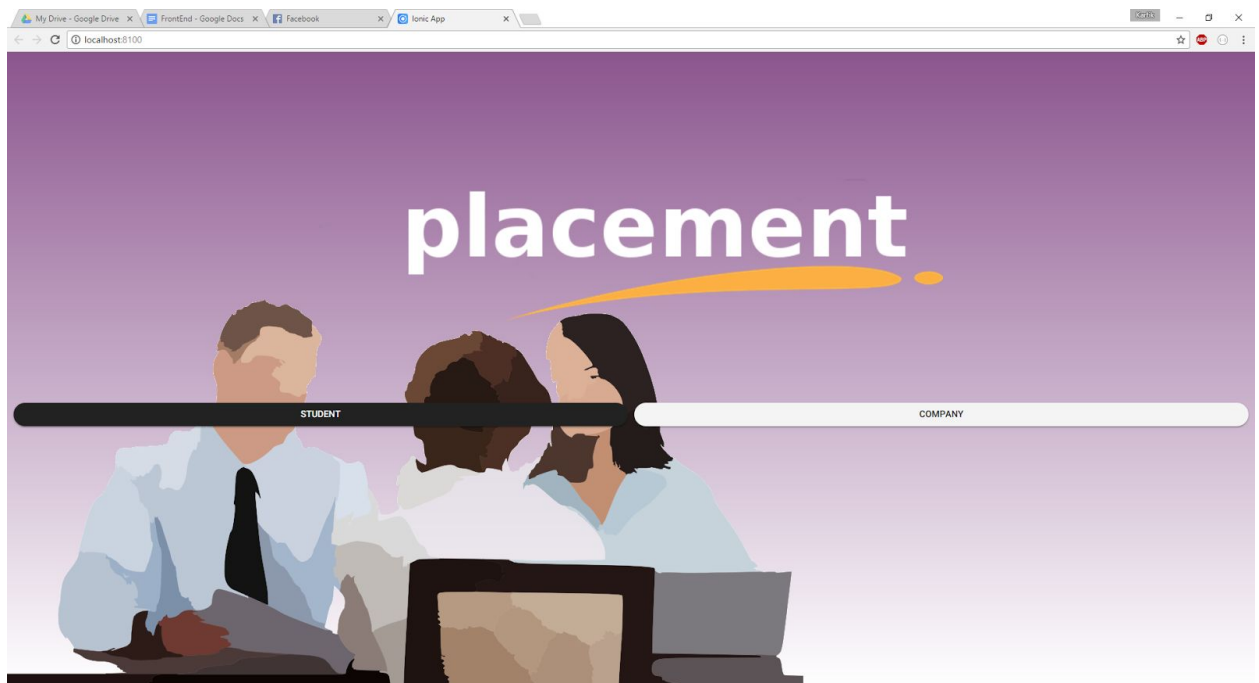
4. Right click anywhere and press inspect.

5. Select a device of your choice (Nexus 6P in this case) from top menu. Browser now emulates the application correctly
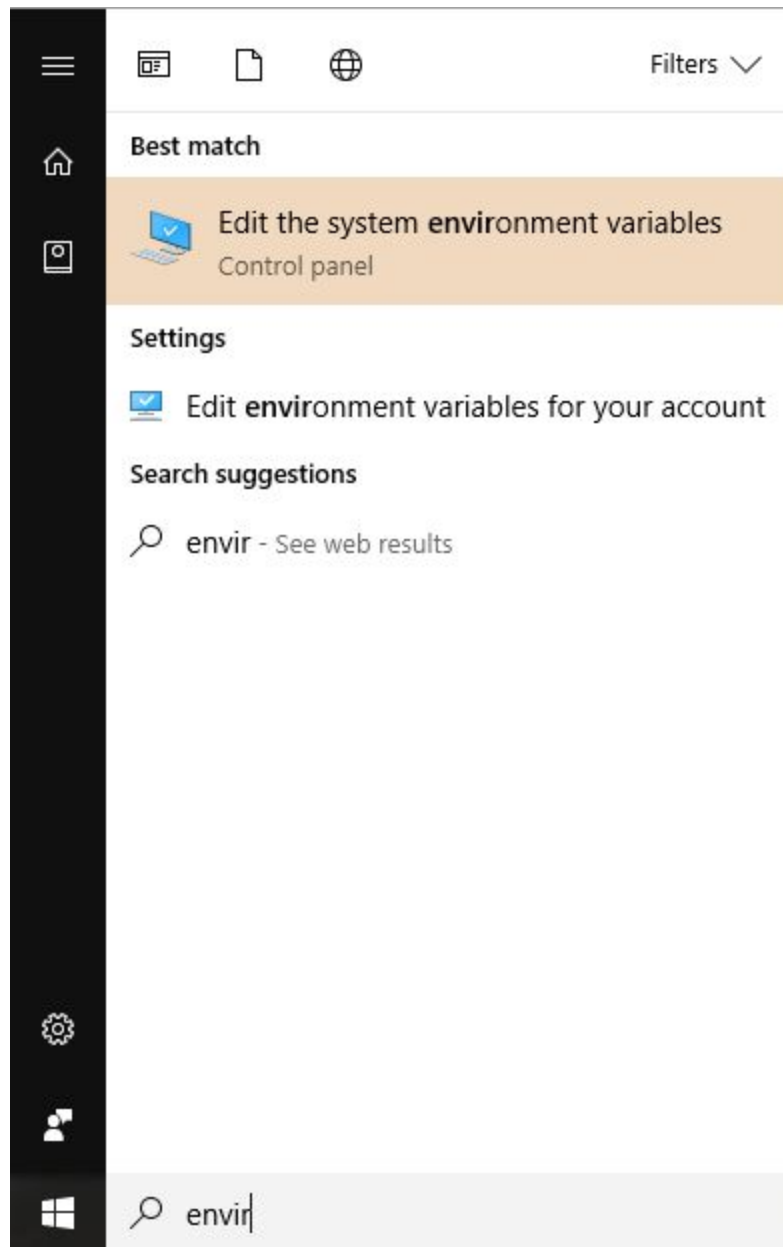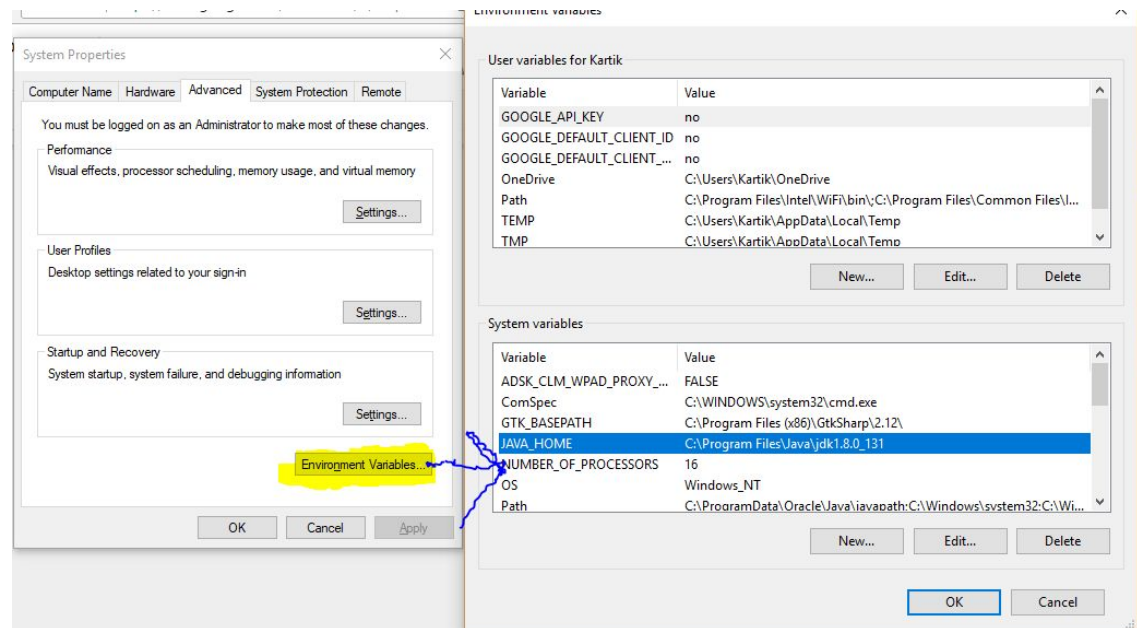

Step 5

Running on android device.

Prerequisite

1. Java Development Kit (JDK) with correct PATH added to environment.
   - Download and Install JDK from http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html
   - Add JAVA_HOME to environment

i.

     ii.

2. Android SDK

    ○ Install Android SDK from
https://developer.android.com/studio/index.html#downloads

    ○ Add ANDROID_HOME to environment variables.

    ○ Note : Ionic currently does not work with latest Android SDK Tools. Replace Android tools subdirectory with content from
https://dl.google.com/android/repository/tools_r25.2.3-windows.zip
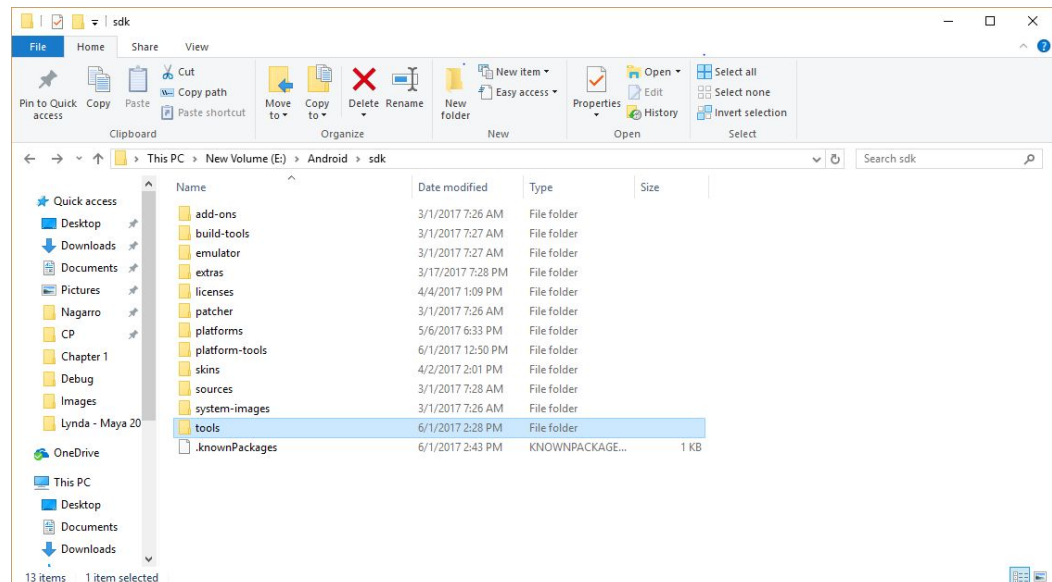
3. Add platform android

- ○ Cordova platform add android


```
C:\WINDOWS\system32\cmd.exe

E:\Nagarro\Placement-API\Frontend\blank>cordova platform add android
```

4. Deploying to device
    - ○ Connect device to USB and enable USB debugging. :
      https://www.howtogeek.com/129728/how-to-access-the-developer-options-menu-and-enable-usb-debugging-on-android-4.2/
    - ○ Enter command
        - i. ionic run android --device


```
npm

E:\Nagarro\Placement-API\Frontend\blank>ionic run android --device

> ionic-hello-world@0.0.0 ionic:build E:\Nagarro\Placement-API\Frontend\blank
> ionic-app-scripts build "--device"

[16:24:57]  ionic-app-scripts 1.3.6
[16:24:57]  build dev started ...
[16:24:57]  clean started ...
[16:24:57]  clean finished in 3 ms
[16:24:57]  copy started ...
[16:24:57]  transpile started ...
[16:24:59]  transpile finished in 2.37 s
[16:24:59]  preprocess started ...
[16:24:59]  deeplinks started ...
[16:24:59]  deeplinks finished in 70 ms
[16:24:59]  preprocess finished in 71 ms
[16:24:59]  webpack started ...
[16:24:59]  copy finished in 2.61 s
```

Using the application
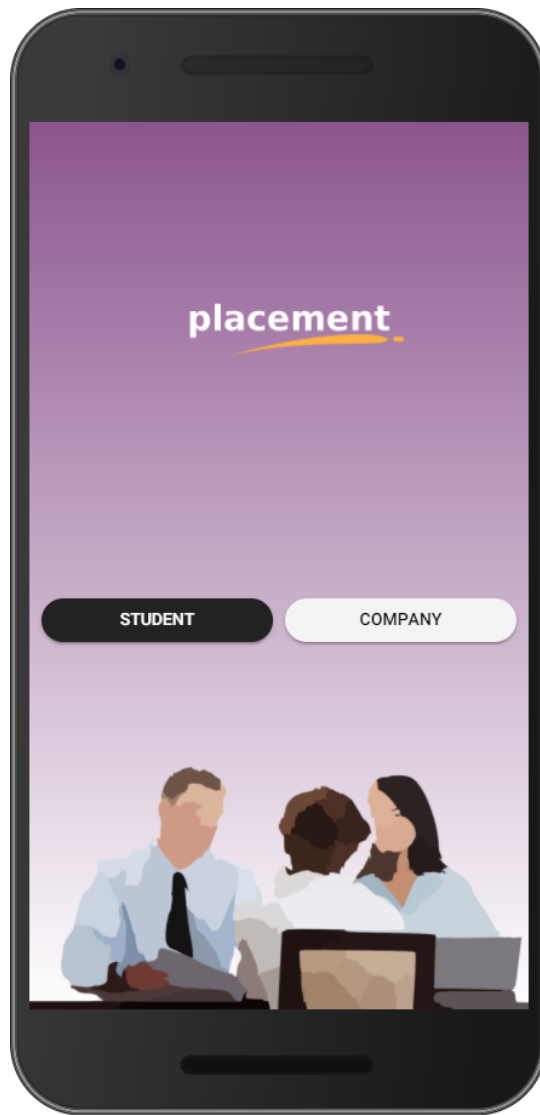
Main Screen

Tap student to view list of students

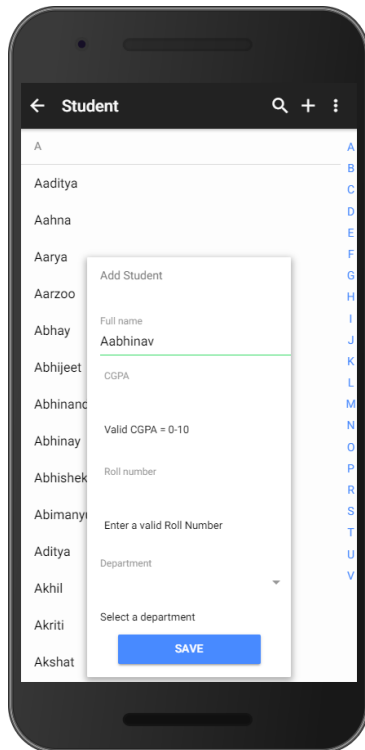Tap company to view list of companies

List of Students

<table>
<tr>
<td>

← Student 🔍 + ⋮

A
Aaditya
Aahna
Aarya
Aarzoo
Abhay
Abhijeet
Abhinandan
Abhinay
Abhishek
Abimanyu
Aditya
Akhil
Akriti
Akshat

A B C D E F G H I J K L M N O P R S T U V

</td>
</tr>
</table>
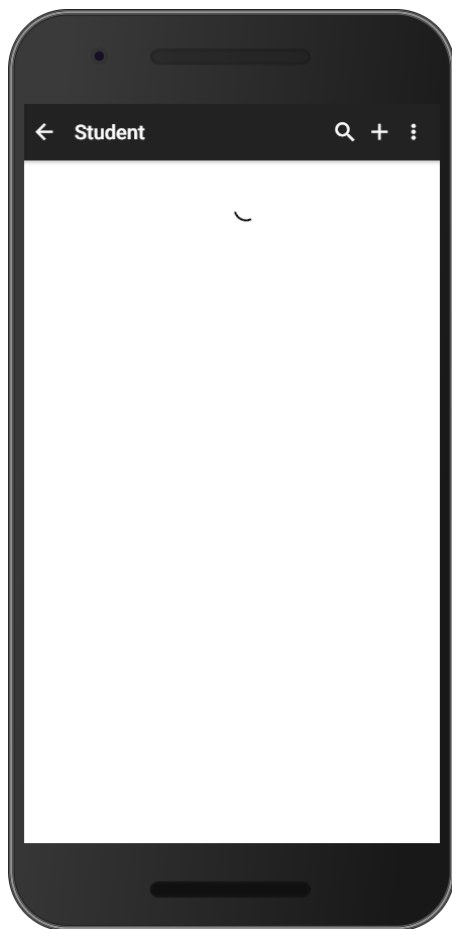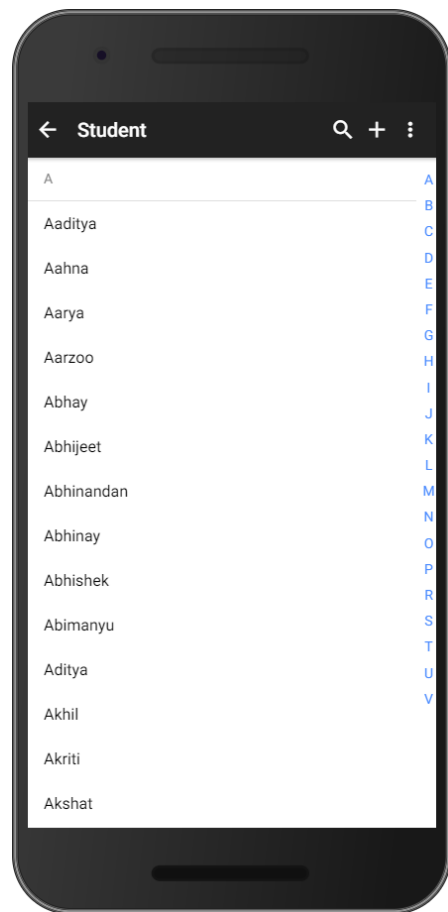
(Loading Indicator)   **(List of Students)**

Adding a student

Tap the + button at top right and enter details. Press SAVE to save the student.

(Popup to enter details)
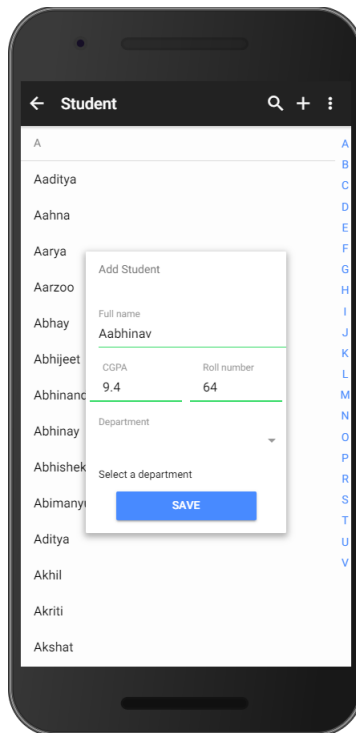
(Details entered)
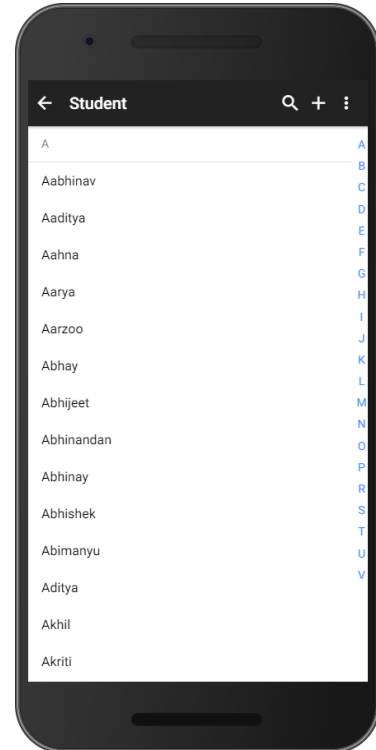
(New student added)

View and edit Student Details

To View student details simply tap on student name.Tap pen button to edit student details
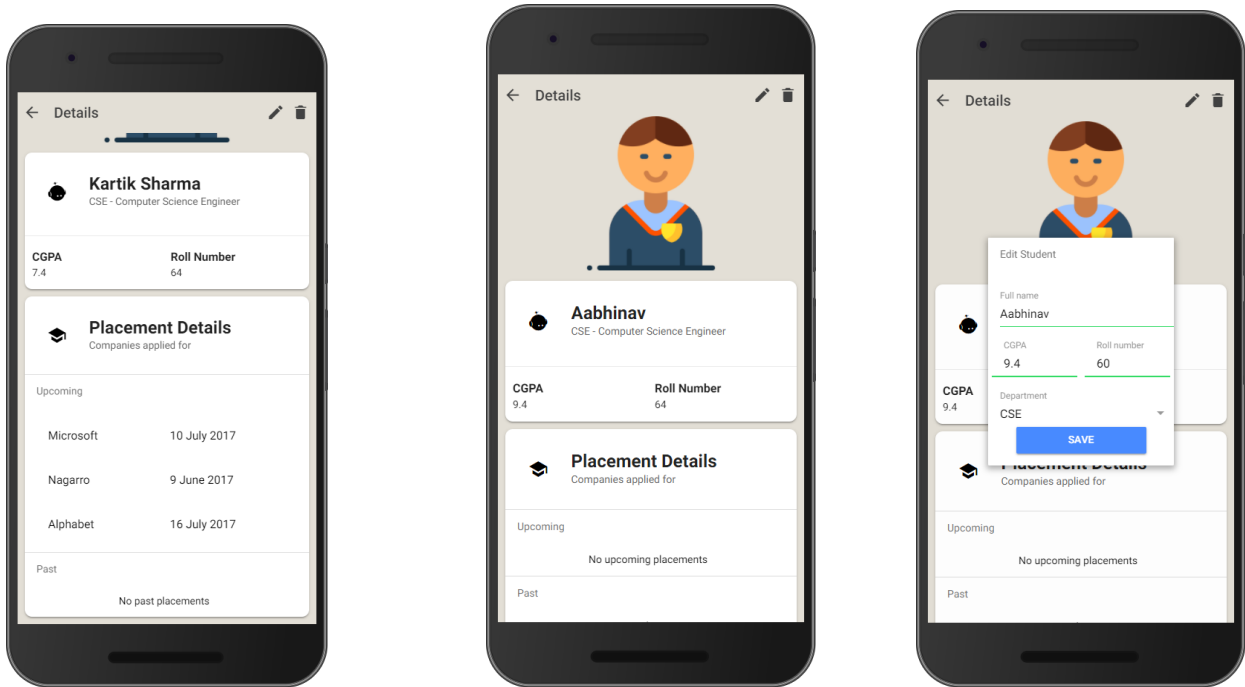
| A | B | C |

A : Student with upcoming placements.

B : Student without any upcoming placement.

C : Dialog box to edit student details

Removing a student

Tap the `bin` icon on detail screen to remove the student from the placement.
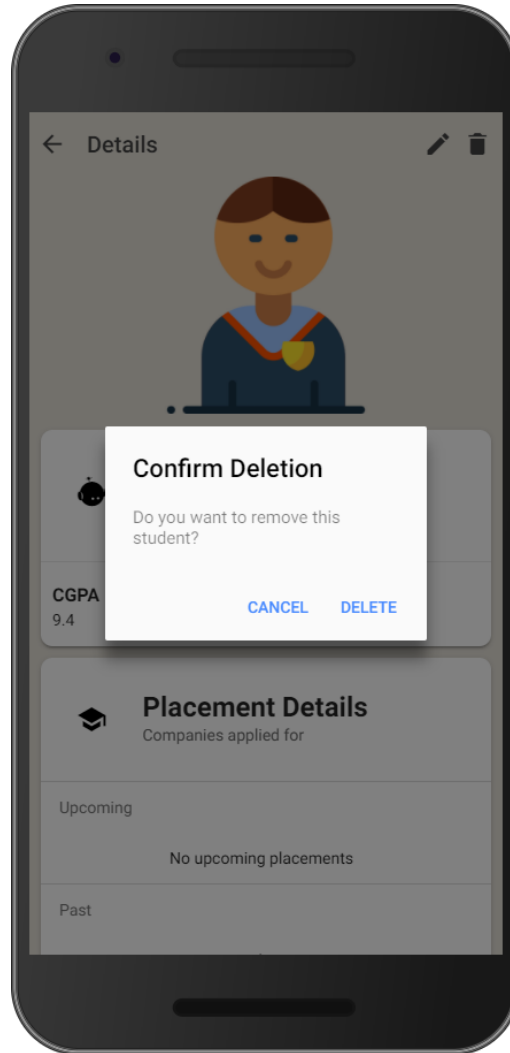
(Alert Box to confirm the deletion)

Filtering Students based on Department (Additional Feature)

To view students only from select departments, tap 3 vertical dots. Choose the departments and press apply
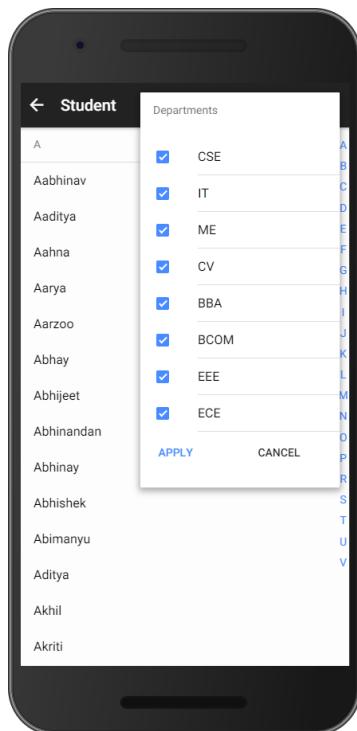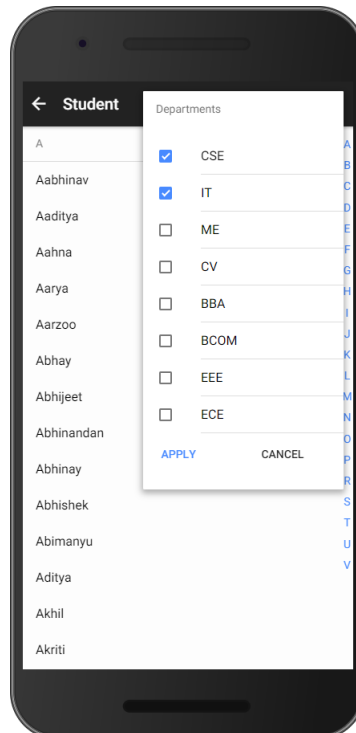
(Default filter)   **(Selecting new filter)**   **(Filtered list)**
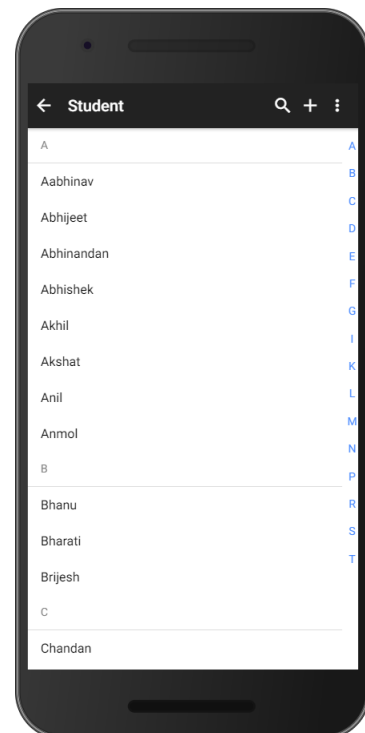
Searching for student by name (Additional Feature)

Tap on search button, and type name of student to search for. Search results are additionally filtered by selected departments.
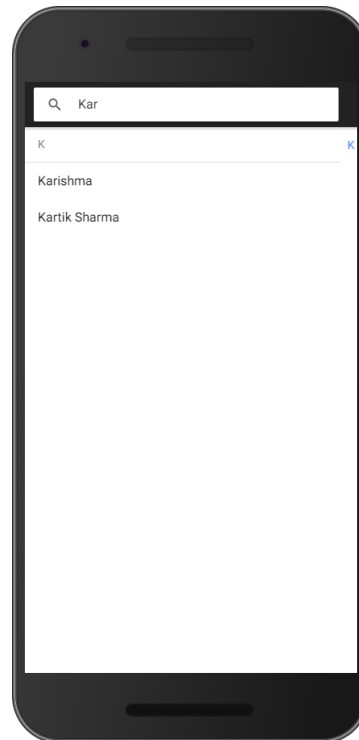
Searching for student by name.

Each key press triggers a new search event which refines the result.

Company List
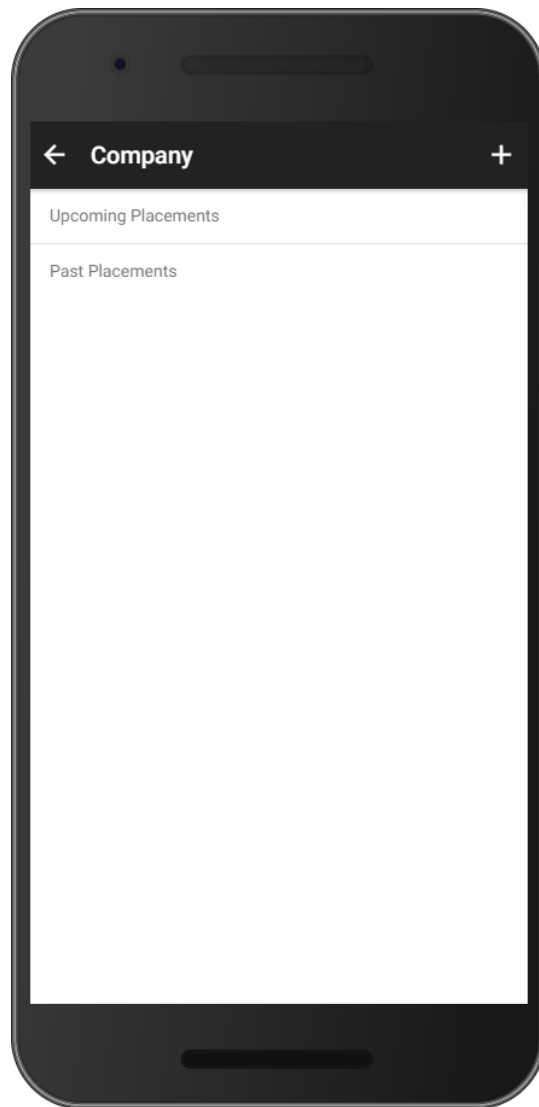
When no companies have applied.

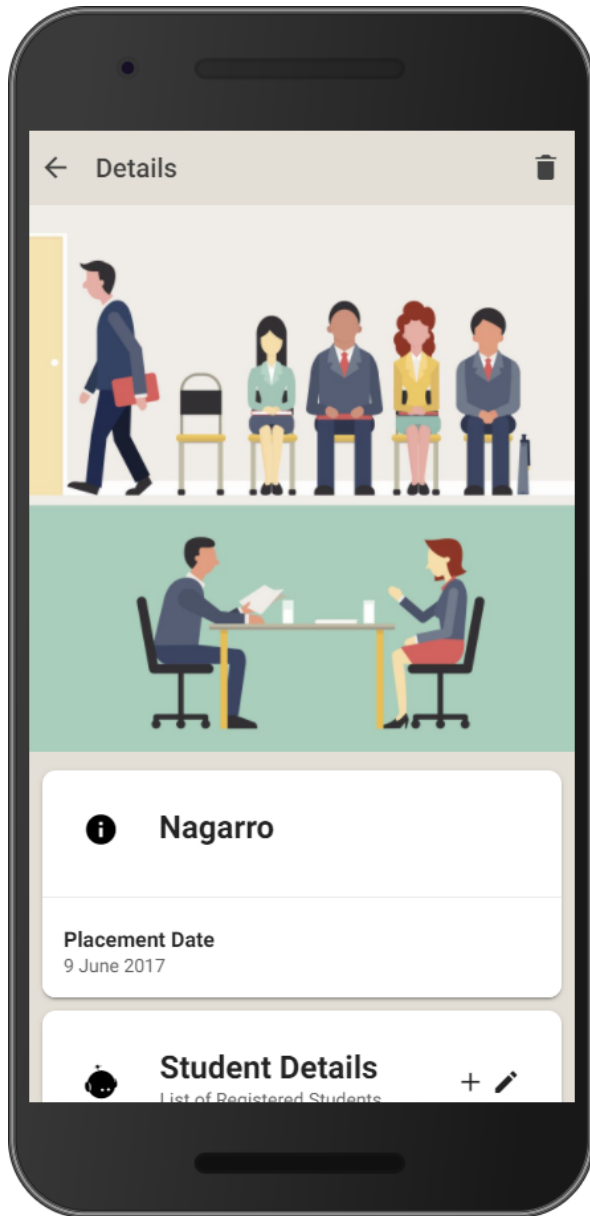## Adding a company

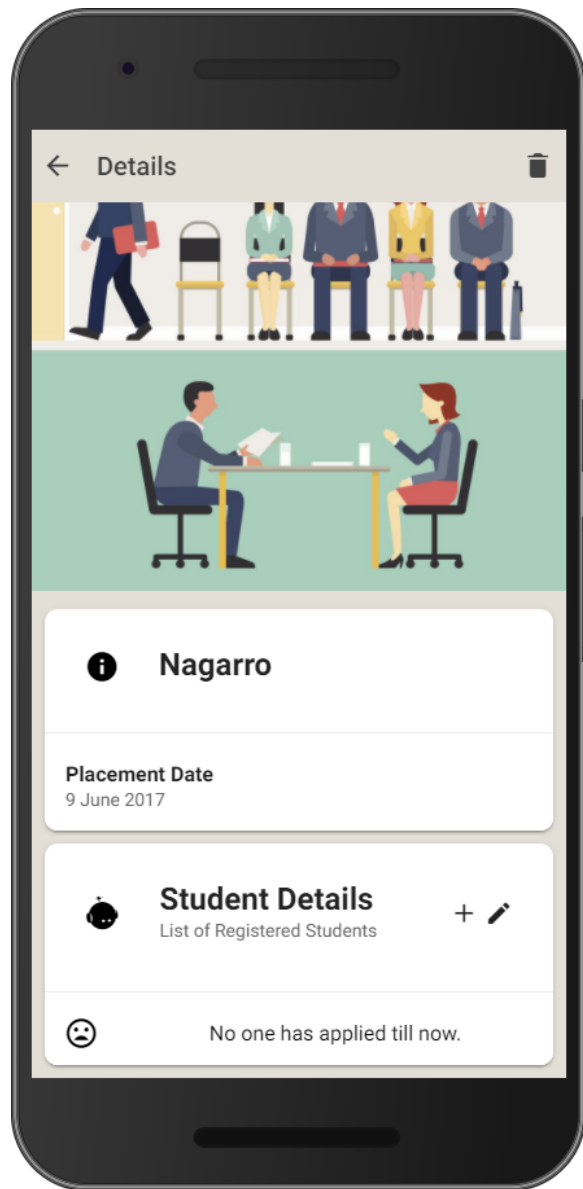Tap the '+' button to register a company for event.
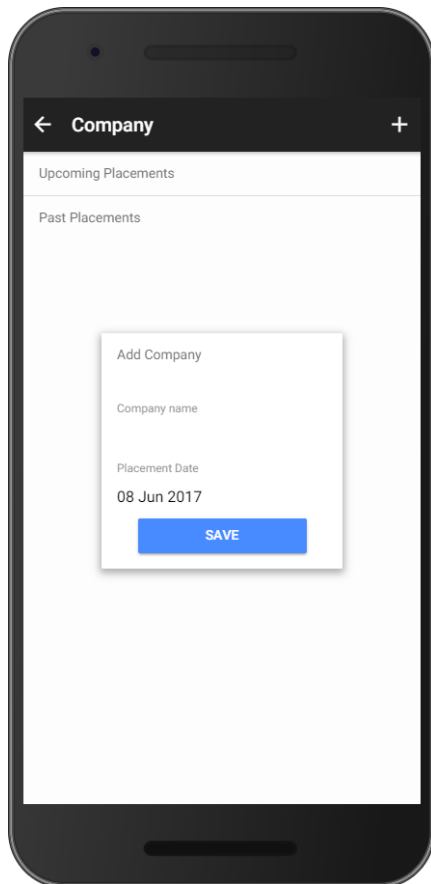
(Dialog to enter company details)
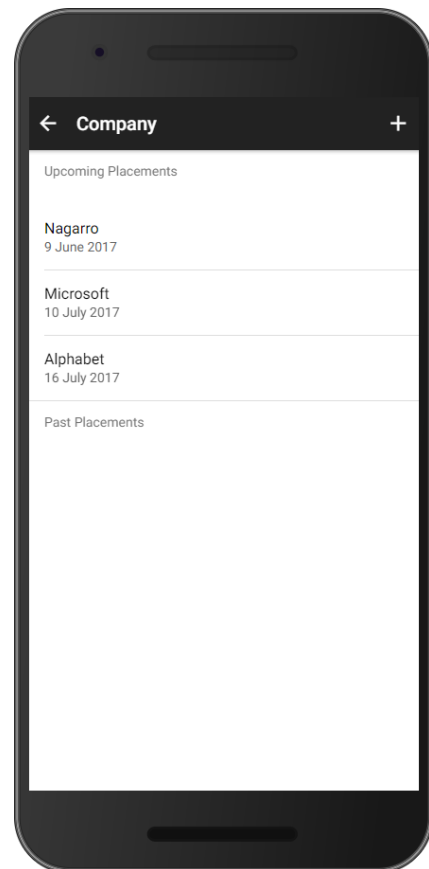
(After adding some companies)

View company details
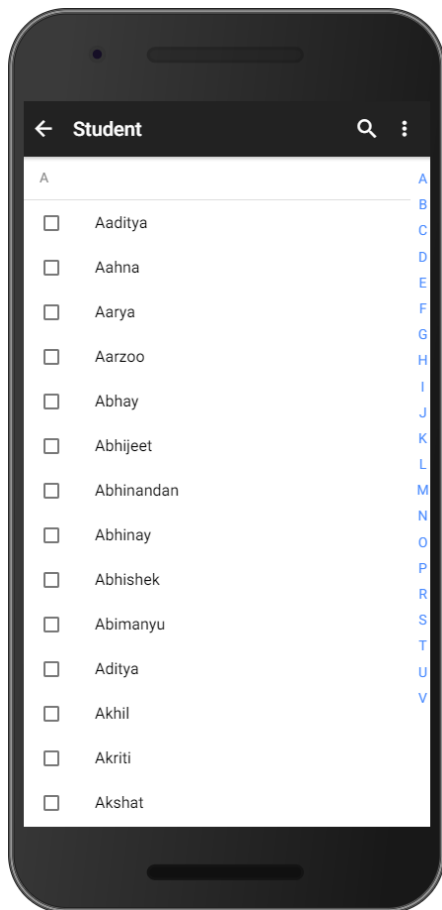
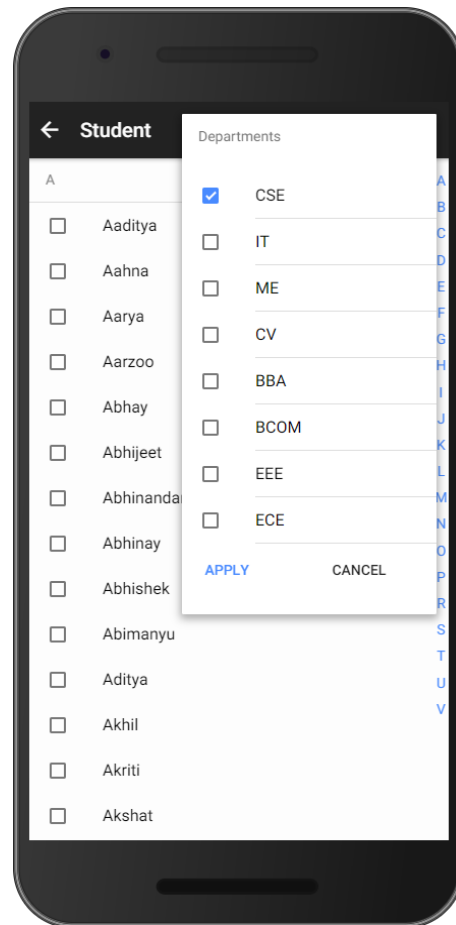Tapping on company name, reveals the details for the company.

(Company details)   **(In case no one has applied)**

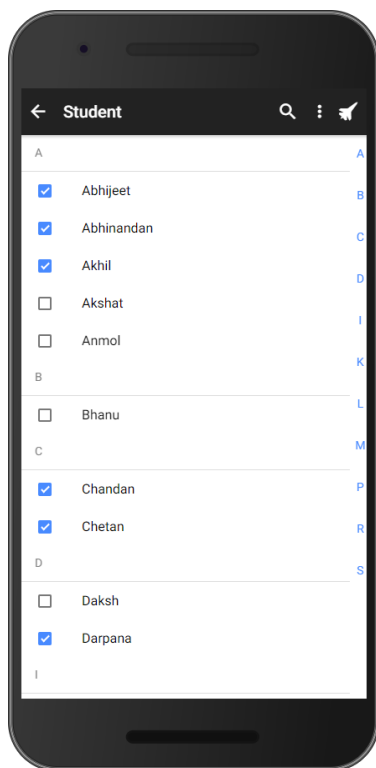**Registering student/s for a company. (Not possible for past placement events)**
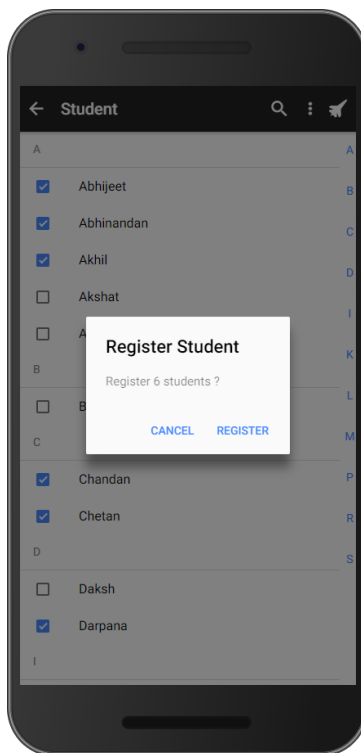
On company details page, click '+' button.
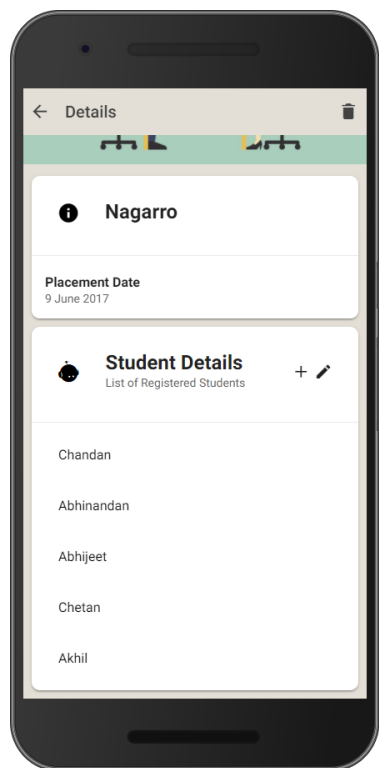

(Select students from list)

(Additional ability to search and filter)

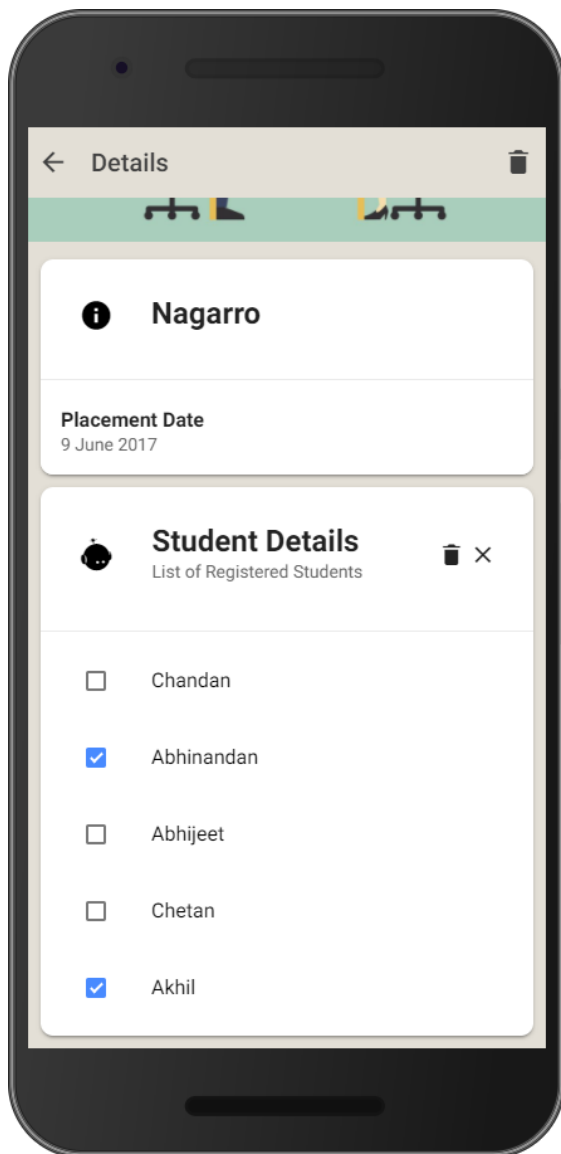**(Selected students)**   **(Confirm to register)**   **(Updated list)**
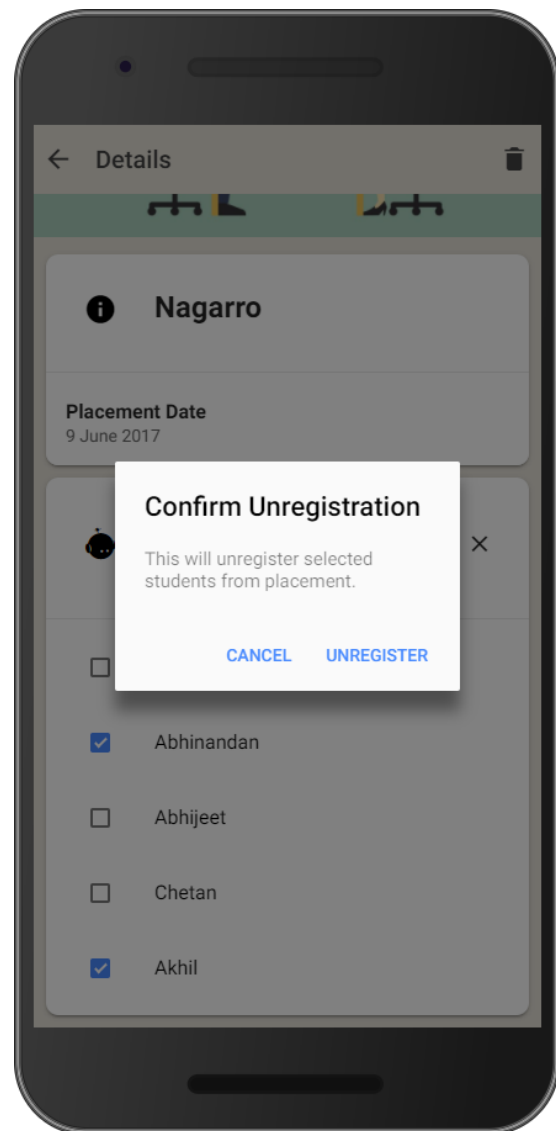
Unregistering students from company

Tap the 'pen' icon and select students to remove.

Tap the 'bin' icon and confirm deletion.

(Checkbox's visible in edit mode)

(Confirm unregistration)

Unregistering company from event.

Press the 'bin' icon on company detail page and confirm company deletion from the event.