Cross Platform Application Development - Assignment

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Evaluation

No	Name	Type	Duration	Weight	Day, Date, Session, Time
EC-1	Assignment-1		-	10%	TBA
	Assignment-2		-	20%	TBA
EC-2	Mid-Semester Test	Closed Book	2 hours	30%	TBA
EC-3	Comprehensive Exam	Open Book	3 hours	40%	TBA

Assignment

- Teams of 4 to 5 People
  - 4 is preferred team size
  - 5 is max team size
  - You can reuse your existing team from other subjects
  - CRs to send Team details by End of day Monday 27th Sep 2021

- Build a Cross Platform App
  - Assignment 1 = 10%
  - Assignment 2 = 20%

- Deadline
  - Assignment 1 : Oct 22, 2021 - before Mid Term Exams
  - Assignment 2 : Dec 15, 2021- before Final Exams

Schedule

Dates	Flipped Class	Other Events
Semester Calendar - First Semester 2021-2022		
Contact Session 1	28-08-2021	Start Date
Contact Session 2	11-09-2021	
Contact Session 3	18-09-2021	Lab Session 1 on Weekdays evening slot(between CS 3-CS 5)
Contact Session 4	25-09-2021	
Recorded Session		Oct 2nd - Gandhi Jayanthi
Contact Session 5	09-10-2021	
		Oct 15th/16th - Dussera Weekend
Mid Semester Exam-1	24-10-2021	SUNDAY
Mid Semester Exam -2	31-10-2021	SUNDAY
		Make-up 2nd,5th Nov
Contact Session 6	06-11-2021	
Contact Session 7	13-11-2021	Answer Sheet Distribution
Recorded Session	20-11-2021	
Contact Session 8	27-11-2021	
Contact Session 9	04-12-2021	
Recorded Session	11-12-2021	Lab Session 2 on 11th Dec or on weekdays between CS 8-CS 10 / Compensatory Session
Contact Session 10	18-12-2021	
		Dec 25th - Christmas
End Semester Exam-1	02-01-2022	SUNDAY
End Semester Exam -2	09-01-2022	SUNDAY
		Make-up 12th,13th Jan 2022
Answer Sheet Distribution(HARD	16-01-2022	
		Feb 19th Tentative start date of next sem

Submission Guidelines

- Source Code to be checked into GitHub
  - Under Org CPAD2021SecA or CPAD2021SecB
  - MIT Licensed - https://choosealicense.com/licenses/mit/
  - Repository Naming Convention _____
  - Readme.MD file
    - Team Name
    - Team Members – Name, BITS Roll Number, BITS Email ID, Github ID
  - At least one check-in by each team member
  - CRs to email the GitHub Ids of the class so that I can add them to the orgs
    - By end of day Monday 27 Sep 2021

Evaluation

- Assignment 1
  - Proposal/Design
  - Presentation by Team (if time permits)
  - Presentation to be checked / submitted into GitHub
- Assignment 2
  - Demo from Source Code in GitHub

App

- Minimum functionality
- Excluding Sign-in / Sign-out
- Social Logins for the App

Front End

- Flutter Dart
  - Cross Platform
    - Two Mobile – iOS and Android [OR]
    - Web and 1 Mobile (either Android or iOS)
  - Social Login

Backend

- REST / GraphQL
- Backend Options
    - Build Your Own
    - KeystoneJs
    - Hasura.io
    - Firebase …. others
- Admin Screens (Optional)
    - React-Admin
    - KeystoneJS
    - Admin-bro
- Hosted on your favorite location
    - Heroku
    - AWS
    - Hasura.io
    - Others
    - On your laptops

Backend Frameworks

- GraphQL
  - KeystoneJs - Server
  - Hasura – Server
  - RedwoodJS – JAM Stack
- REST
  - Firebase – Cloud Functions - Serverless
  - Netlify – Cloud Function - Serverless

KeystoneJS

- URL: https://keystonejs.com/
- DB (Prisma.io)
  - Postgres (free tier available in Heroku)
  - SQL Lite
- API – GraphQL
- Admin Screens
- Social Login to be done
- Code: Low Code / Javascript / Typescript

Hasura

- URL: https://hasura.io/
- API – GraphQL
- DB – Postgres
- Admin Screen – React-Admin – external framework
- Code: Low Code/Javascript/SQL
- Free Hosting is available

AWS AppSync

- https://aws.amazon.com/appsync/
- API: GraphQL
- Code: Functions / Lambda - Javascript
- DB: Dynamo DB

Loopback.io

- URL: https://loopback.io/
- API:REST (option for GraphQL)
- DB: Lot of Options
- Code: Javascript
- Hosting : On your own

RedwoodJS

- URL: https://redwoodjs.com/
- API: GraphQL
- DB: Prisma.io (Postgres…)
- Code: Javascript

Heroku

- https://www.heroku.com/pricing

React-admin

- https://marmelab.com/react-admin/