SYLLABUS

INTRODUCTION TO FLUTTER DEVELOPMENT

INTRODUCTION TO DEVELOPMENT WITH FLUTTER

- Learn to set up a new Material App using Android Studio.
- Understand the Widget tree and learn to use pre-made Flutter Widgets for user interface design.
- Learn to incorporate Image and Text Widgets to create simple user interfaces.
- Learn to customise pre-built Flutter widgets.
- Add App Icons for iOS and Android builds.
- Learn to run Flutter apps on iOS Simulator, Android Emulator and physical iOS and Android devices.

CREATING BEAUTIFUL UI WITH FLUTTER

- Use Hot Reload and Hot Restart to quickly refresh the app UI and understand when to use each.
- Learn to use the Pubspec.yaml file to incorporate dependencies, custom assets and fonts.
- An introduction to the Widget build() method.
- Learn to use layout widgets such as Columns, Rows, Containers and Cards.
- Incorporating Material icons using the Icons class.

BUILDING APPS WITH STATE

- Understand the difference between Stateful and Stateless Widgets and when they should each be used.
- Understand how callbacks can be used detect user interaction in button widgets.
- Understand the declarative style of UI programming and how Flutter widgets react to state changes.
- Learn to import dart libraries to incorporate additional functionality.
- Learn about how variables, data types and functions work in Dart.
- Build flexible layouts using the Flutter Expanded widget.
- Understand the relationship between setState(), State objects and Stateful Widgets.

USING THE DART PACKAGE MANAGER

- Learn to use the Dart package manager to incorporate Flutter compatible packages into your projects.
- Learn more about functions in Dart and the arrow syntax.
- Learn to refactor widgets and understand Flutter's philosophy of UI as code.

STRUCTURING FLUTTER APPS

- Learn to use Dart Constructors to create customisable Flutter widgets.
- Apply common mobile design patterns to structure Flutter apps.

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