Reactive Programming with Angular RxJS

1. Introduction to Reactive Programming and RxJS
    a. What is Reactive Programming
    b. Understanding reactive programming principles
    c. Data Streams
    d. The Observer Pattern
    e. When to use reactive programming.
2. Introduction to RxJS
    a. What is RxJS?
    b. Why use RxJS?
    c. RxJS role in Angular
    d. Setting up RxJS in an Angular project
3. Observables and Observer in RxJS
    a. What is an Observables
    b. What is an Observer
    c. Creating Observables
    d. Subscribing to Observables
    e. Executing the Observable
    f. Disposing Observables
    g. Creating and subscribing to Observables in Angular application
4. Operators in RxJS
    a. What are operators?
    b. Pipeable Operators
    c. Creation Operators
    d. Marble diagrams
    e. Categories of operators
5. Fetching data as Streams
    a. Reactive pattern for fetching data
    b. Retrieving data as streams
    c. Defining the stream in your component
    d. Using async pipe in your template
6. Combining streams
    a. Imperative pattern for filtering data
    b. Declarative pattern for filtering data
    c. The combineLatest operator
    d. The declarative pattern pillars
    e. Emitting a value when an action occurs
7. Transforming streams
    a. Reactive pattern for autosave
    b. Higher-order observables
    c. Higher-order mapping operators
    d. The concatMap operator
8. Error Handling in RxJS
    a. Error handling patterns and strategies
    b. Handling error operators
    c. The catchError operator

    d. The delayWhen operator
    e. Error handling in action
9. Subjects in RxJS
    a. What is a Subject
    b. BehaviorSubject
    c. RelaySubject
    d. AsyncSubject
10. Testing in RxJS
    a. Subscribe and assert pattern
    b. Marble testing pattern
    c. Understanding the syntax
    d. Implementing marble tests