Question 1   State management explained briefly

* Provider : this is a simple and light weight state managem. ent solution built on top of Inherited widget . It allows data sharing and it uses change Notifier to notify listeners when data changes .

* Riverpod : this is a state management that is more flexi. ble compared to provider , it doesn't depend on the widget tree. it is more safe and more testable . More over it suppo. rts compile time error checking and better dependency management

* Bloc (Business Logic component): It is based on reactive programming using streams . It separate business logic from UI completely . Moreover it uses Event (inputs) and States (outputs) . It is highly structured and predictable

* Get X : This is a light weight state management solution that combines state management , dependency injection and routing . It has very simple syntax and it is very fast to implement though some developers argue it can encourage poor architectural habits if not used carefully due to its "magic" approach

Scenario	Provider	River Pod	Bloc	GetX
Small Applications	Best (simple and quick)	work & well	Overkill	Work well
Medium Applications	Good Fit	Best choice	Good Fit	Good Fit
Large Enterprise App's	Can struggle	Good fit	Best Choice	Not recommended
Team Projects	Manageable	Good fit	Best Choice	Can cause inconsistency
Fast development	Moderate speed	Moderate speed	slow setup	Best Choice
Strict Architecture requirement	loosely enforced	well structured	Best choice	Too flex rate / loose