3.00	Name: - Ajinkya Sunil Patil
	MPL Assignment of AAR 05
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Ġ1.	ance I will a small small state 19 advanced 2011 to the
a)	Explain the 19-4y features and advantages of using flutter
	for mobile app clevelopment.
Soln:	
	key features of flutter :-
Levy and the	1) Single codebare - White one code for both Android and
	101.
Property and	22 fast bertemance - Ages Dart language and a pigh-bertem
in state	cance rendering engine.
Property (172)	will not the state of the state
anybore/of	3) Hot Relocal - See Changes instantly without nection
arritmo.	- not the app.
415	4) Rich ut components - comes with cultonizable wierds
	# for smooth Us design.
	5) Native-like Experience- possides high-quality animation and fast execution.
	Advantages of wing flutter :-
- Auderland	1) Sove Time & Effort - Bingle Coolebare for multiple
	Markouns.
	2) High Speed Development - Hot Reload Fraktires Speeds up
Lag	codings.
	37 cost- Effective - Reduces Development cost & time.
	4) Attractive or - provides beachiful and cultomizab
	widget.
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Bolns- How Flutter Differs From traditional Approaches? 1) Single codebare - Traditional replaced separate code for Anchord and ios. 2) Hot Reload - Traditional apps regular full restant after changes, but flutter update intu
traditional approaches and why it has gained popularity. in developer community. Boln:- How flutter Differs from traditional Approaches: 1) Single coolebare - Traditional methods peeds separate code for probabl and ios. 2) Hot Reload - Traditional apps require full restant after changes , but flutter update hitu 3) Us Rendering - Traditional apps we native component
traditional approaches and why it has gained popularity. in developer community. Soln: How flutter Differs from traditional Approaches: 1) Single coolebare - Traditional methods peeds separate code for Android and ios. 2) Hot Reload - Traditional apps require full restant after changes , but flutter update hitu 3) Us Rendering - Traditional apps we native component
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3) UI Rendering - Traditional apps we notive components
3) UI Rendering - Traditional apps we notive components
1) performance - Flutter compiler directly to notive
machine code making it faiter
than framerousk
Why Flutter is popular Among Derelopers:
1) fast Development - Hot Reload and dingle codebuse
2) cm8-platformt - want or satisfy
3) Beautiful UT - Rich, customizable weband delktop
18K6 Beach Native. Coddery Builder
And High performance - Runs smoothly without a bridge
like React Mative
5) active community - Regular update and strong
community help developers.

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a	rescribe the concept of the wilder gues in pulling
	Explain how whilet compositions is used to build complex
	Wer interferes.
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Boln ?-	1) Concept of Wildget tree in flutter:
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	the syllowine, collect the wholater time. This time
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	Contain child widgets.
	Constitution of the state of American State of the state
	DFor Example, a Scaffold widgets cun have a column
- 1	about which contain text and taction widgely.
	Changes in widgets up dates the tree dynamically.
*	I drownes the like aynamically.
	3) Willyet compatitions from
	3) Widgets compositions for complex of o-
	Flutter uses small memable intelest to build complex us
0/201	Instead of creating a timple tourge us block, developers.
	combine metrille small widgets likes Rows, columns.
	arganais after writion?
	End on the control house along the
	200 A LINE Com Contain multiple Carol undgetters of Column con hold Text Frages and Buttons.
	is) A column can hold Text, Images and Buttons.
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antitoli	This modular approach make the us flexible, reidable
	and early to munage.
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<i>b</i> >	peoples in over	tes of Commonly conting avoidget in	tred widgets and Their
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Muc	applications.
	delication of the later to A application prolitical
oln :-	
	Importance of state Management in flutter Application:
	Blake management is important because it controls how
	the appropriat with it.
	The first start of the Committee and Johnson Committee C
	Why State Management is Needed?
	1) Heeps we applied - Ennine that the app netters changes.
	2) Improves hertomance - wholaves only secessary hautof the
	us instead of reloading
	3) Manage complex data.
	4) Enpure smooth your Experience
	Majorany Extractory of Tedinal and the
	Types of Stude in Fluter-
	Markey and Donker mile than west harrows of well as
	1) Local State.
	2) Global State.
	The control of the co
17	matter similarly protocopalist in matter as sister,
[4	Compare and consmust the different state management
	approaches available influtter such as settlate, provider,
	Ond Riverbood , bearight prevation where early absorbed is
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Approach How it works When to Use. SetShake uplate UI by Best for small approximations activated to Suitable widget. Drowker Themstell Widget to Suitable for medium that arous dized approximations. Riverpool Temproved Version of Best for large approximation. Provider with batter performance. Choosing the Right Approach: Use bettink to Simple VI update. Use provider for moderate thate. Use Riverpool for well-Structure applications. Of Explain the prosess of integerating firebare without Platter application. Signeds the beautiful application. Soln:						
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	process of integrating fineboure with a flutter application.
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(2. Add Pineberse to frutter app
11	3. Intal Finebare hackages.
	4. Initialize Firebare.
	5. Use firebare fervices.
	- Create Marie Continue of the
	Benefit of Using Finchane as a belokend folnis-
	1. Reultime Dateberre
	2. Authenticulian
	3. Cloud Finestone
	4. Hosting & Stenage
	5. push Motification.
6	Highlight the Finebase beaviles commonly used in flutter s destelopment and provide a brief overview of housebother Synchronization is achieved.
oln:	Common Firebare Services Uted in Flutter Developements-
	1. Firebase Authentication.
	5. Cloud timespane
	& firebare Realtime Databate.
44	11. Finchare cloud Sterrage
	P. Firebare doud messaging
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not that the	6. tirepare Hoshing
	7. Pinebase Analytics
	How Data Synchronization is Achieved:-
	1. Realtime Updates deadon's assetting
	3. Offline pupper.
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