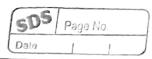
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	MPL Assignments 1
9.1.0	Explain the key features and advantages of using flittles for
	mobile opp development
$\rightarrow$	ll • 1 'a' 'A • a
	Key feature of Flutter:  1. single Codebase - Write one code for both Android
	cond (US:
	2. Fait performer - lies part language and a high performer rendering engine. 3. Not Reload - lee changes instantly without
	high perference sendering engine:
	3. 1801 Reload - Soo Change instantly without
	restarting the opp.
	4. Rich UI Congonent - Comes with customingally
	widaet for involls UI design
	s Open Lower - Free to use and has a strong
	develoger connuity.
	· Advontage de lling Flutles.
	Advortages of ling Flutles: 1. Sover time & Effort - Single codelars for rultigle platform 2 High freed Revelopment - Wol Reload feature.
	1 High heed Povelon mont - Was Reland Leature
	a Cost Effective - Reduces develor and cost
	3. Cost Effective - Reduces development cost 4. Atherive UI - Provide beautiful ad custorizable order.
	1. Our bound of how and recompany order.
1)	Eiseus how the fluther fromework differs from traditional approaches and why it has gained projectorists by developer community
<i>D</i> ) ·	success you my fund proneutic cupies from moduliers
	off values and whig is now gowned projectories in
	developer community
7.	How fully kiffer from I raditional ryproach.
	How flutter Riffers from Fraditional Agroads.  1. lingle Coolebase - Fradetional rellod need reperate code for Android and ; Os but flutter uses are code for both.
	code for Android and ; OS, but flutty uses one
	code for bots.
	2. 11 of reload. I reductioned opps regime full restart after

3. UI Rendering - I randultioned oggs. we notive conjoint, while flutly has its own rendering enjur G. Perfermone - Fluther compiles divelly to native machine code, makes making it fails than fromeway. Why Flatter a Popular Arrong developers.
1. 3 art Revelopment - 16at Reload and rings cooleloss 2. Cross Phalfer hyport - Warts on riobil, web and deuklop 3. Deantiful II - Rich, custorizable widget for modes 4. Vigh Perferonce - Runs smoothly without a bridge 9.2.9 Reverit the concept of widget there is flather.

Englain how wedget conjunctions is used to build

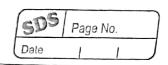
conjunction of widget Tree in flather.

9 11 the well this is a ridget of widget of the second of widget of the second of widget of the second of the In fluther, everything is a widget, widgets are avronged in a tree structure, called the widget. In the She hee regressit the UT of opp. Widget Composition for Corylec VI:

flutter were small, remable widget to build

conflex VI. Intlead of creating a single large

VI block, developers combine multiple widget eg. 3 A hit View can contain multiple Cord Widgels
2) A Cohenn con hold loct, Images and Dutlos



Ъ.	Provide exorgles of commonly used widgets.
$\rightarrow$	J. Scaffold - Providy the basic layord structure 2). Applos - Displays the top ravigation bar with title
	2). Apros - Displays the ton ravigation bar with title
	3) tot - Displays eingle-lod
	3). Image - shows erage from and on URLS
	s Container - Used for etuling.
	6). Row-Narrange child widgets horizontally. 7) (olumn - Arranges child widgets vertically. 8) listwices - Ruplay ecroblable lists.
	7) (olumn - Arongey child widgets vertically.
	8) listwies - Ruplay rerollable lists.
	Econgle Widget the
	[My App)
	Material yn
-	My Home Page
	Scaffold
	App Dar Center floting Action Octor)
	Tot Column Jacon
	[ Jest   Jest
	, · · ·

J	
<u>3</u> aJ.	Discuss the injectore of state management is flutter. State management is irreportent because it control how the appropriate, updates, and displays dates when the
→·	State management is important because it control how
	the on story, undale, and dislay date when the
	wer interact with it.
	Why blate Monagement is Needled?
	J. Keeps UI Updated - Errures that opp reflect bongs.
	2) Injerove l'enferrance - Updale only recessary pade
	of UI intend of reloading withing.
	3). Manager Congles Data - Hely hardle & un word
	of VI intend of reloading everthing.  5). Manager Congles Data - Help hardle & cur work  5): Grunes Smooth Ulu Egenen - Keep & an reporter
	Degres of Itali in Flittles
	Deges of Itali in Fletles.  1. local thate - Managed within a ringle widged  2. Global Thate - Mared across multiple servers.
	2. Global Floto - Mored across multiply revery.
	V -
b).	Conpae and contrast the different that management
	gricodes vailable is I littles, with as settlet;
	Conpae and contross by differed thate management opicacles ovailable is I littles, much as settlet; Provides and Riveyord.  Aprooch How it Washs When to Use
<b>→</b> .	Approach blow it Works When to Use
	set tate Updates vi by calling set etate() Best for small opposing is a statefully igalget or monapaging state.
	is a thatefully igalget or monapaging Many.
	Provides Uses Inherited Widged to shore Suitable for medium state across widgets used aggs where data
	thate across wedger used offis while con-
	Riversed & unproved veries of Best for longe offs
	Riverged & improved veries of Best for longe oggs
	Riverged & improved veries of Best for longe ogs Provides with bells performers that need congless single syntax: retate
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Charing the Right of groots  • the rethtals for right of undate  • the Provides for moderal slat showing across ands  • the Rivingor for moderal slat showing across ands  • the Rivingor for moderal slat showing frictions.  as a bocker of integrating firebox with a flutter  as a bocker destrois.  • Process of Integrating firebox with a flutter Application  1. Create a firebox Project - Go to i firebox corrote)  • Add firebox to flutter typ - Regite the app and  download the google survices from  3. Intall friebox Portrages - dod dependences by  'firebox-core' and 'frebox auth' is judyec youl.'  5. Initialize firebox - Import firebox in main day'  and call frebox initialize the	
24 d Ceylain the process of integrating firebose with a flutter application. Diview the benefit of ming firebose as a bockered solution.  Process of Integrating firebose with a flutter Application.  1. Create a firebose Project - Go to i firebose console)  2. Add firebose to flutter by - Regites the application download the google services just.  3. Intell firebose Pockages - Add desendences here	
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3. Intall friebay Porkages - Add degendencies kuts 'frebas - core 'ond' frebase auth' is jubyec yord! 4. Intialize friebay - Import friebas is mais dad'	
'frebay - core ' ond ' frebax auts' is jubyer yord:	
4. Initialize firebay - Import firebay is mais dad	
and call bielay initialize type!	
s lle fielan Service - Inflerent authentication,	
database or doud fundion as needed.	
Berefits of Mury fireboss as a Dackend Solution  1. Real time Database - Syncs data instantly across deines  2. Aethertication - Provides ready - to - un right in ofling.  3. Scalability - trady large bases without managing  4. Purh Notification - Dends about and updates to a	<u> </u>
1. Real time Databage - Synces data instantly across deines	
2. Aethertication - Provides ready - to - eu rigg in ofling.	
3. Scalability - + Corolly lorge bases without managing	
4. Purh Notification - Sends alert and undates to	sse.
	-

b) thighlight the Fireboup services commonly used is fluther development and provide a brief overview of how data synchronization is achieved. -> Common firelare services thed in fluthes Revelopment. 1. Firebay Kuthentication - Providy wer uggs - is rietood 2. Cloud finester - A Nosal database that stone and signe data is real ling. 3 Firebay Realtime Database - Stores and updails data instantly across all connected devices 4. Firebar cloud storage - Used for storing and retrieving files like images and vicley: 5. firetran (loud Messaging (P(r)- sends puch notification. 6. Firebox horting - Rylogs web oggs inds food and secure hosting. Plow data synchronization is Achieved.

1. Real time lepdate - Firestoy and Realtime Database syme data acray device 2. literes & theory - Vidget lider for danger -S. Officer support - ferelow caches data allowing appr to work office and syne when online. This enures fail, smooth and automatic dorter egidele is fluther apps.