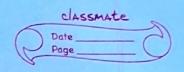
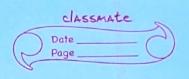
	ASSIGNMENT:-04.
Q·1·	List and explain the features of advanced manganes
	1) Relationships in manager represent how come
	document are logically related to each other
	Relationships can be modered via Embedded \$
	Referenced approaches such relationships can
	be either 1:1, 1:N, N:1 or N:N.
	2) covered query is a query in which all the fields
_	in the query are part of an index fall the field
_	returned in the query are in the same index.
	3) Analyzing queries is overy important aspect of
_	measuring how effective the database & indexing
1 City	delign is
_	4) map- reduce is a data processing praradigm for
	condensing large volumes of data into vietu
	aggregated results
	5) mongoob storted supporting textindexes to
	search inside string content.
	e) Rockmongo is a mongo DB administration +001
	using which you can manage your server, databar
	collections, document, indexed and a lot more
	t) copped collections are fixed-size circular collection
	that Follow the insertion order to support high
	performance forcreate, read and delete operation
().2.	Explain any four methods of console object in node
	with suitable example.
	In node js, the console object is used to print
	meisage on the console. It provide several
	use ful methods for debugging and displaying
	output
	The same with the same that it was morning



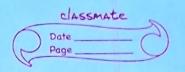
```
1) console log ():-
    -used to print normal mellage or information
    on the console.
   - cg. conjoie. log ("welcometoHode·is");
    2.1 console · error ():-
    - used to display error meisage on the console
    - eg . console error ("This is an error message");
    3) console · warn ():-
    - used to print worning menager
    -eg. console worn ("This is a warning mensage");
   4.) console table():-
    - Used to display datain atabular format. It is
    very useful for displaying arrays or objects.
    - eg. conit student = [
        name: "John", marks: 85 },
        I name: "Alice", marki: 90 }
      conjule tuble (students);
O3. Write a short note on Pm2 microservices?
   1) Pm2 is a process management module for Node is
    applications It is used to start & monitor Node is
    application soir the application goes down the
    process manager will restort the app immediately
    making it available once again.
    2)pm2 help you by restarting your mode opplicational
    o service every time you restrait the server.
   3) Install pm2 by typing following at command
    npm initall pm2-9
```

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	(") (") () () () () () () ()	4) The simpleit way to stort, deamonize † monitor your application is by using this commandatine: pm 2 stort app.;s. 5.) \$pm2 ecosystem - To generate an Ecosystem file 6.) This will generate an ecosystem .config.; fiftle. module: export = { apps: [{ name: "app", Script: " · Japp.;s", env: { Napt Env: "development", } env-production: { Napt Env: "production", }
		name: 'worker's
		Script: 'Worker-js' Manshutan and and and and and and and and and a
	Ø· u·	Explain the callbacks innode js with suitable example.
	10m31+0	possed as an argument to another function. This is called ofter the completion as
~ ~	bas	operation like reading file, database operations
,		3.) Since Mode: is is non-blocking and event-driver
_		



combacks allow the server to continue executing other operations while waiting for an operation to Finish. 4) Eq. conit fs = require ('fs'); fs. readfile ('example txt', 'utf8', function (err, data) if cerr) } console log ('Error reading file:', err); console. log l'file content: 's data 13 console log (' Broding file ... ') > Olp:- Reading file.... File Content: (content of example txt) O.s. what is the purpose of map reduce ? Explain it with a suitable example. 1) mop Reduce is a programming model-wed for processing & generating large datasets with a parallel, distributed organithm on a cluster. 2.) main Purpose: - To handle Big Data efficiency. - To process huge amount of data by dividing the tacks into smaller sub-talk (map) and then combining the relults (Reduce) - Provides scalability, fault tolerance, and better performance in distributed system like Hadoop. 3.eg problem: count the number of occurrence of each word in agiven dataset

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	The same of the sa
745	Input Dota:
	Hello World
	Hello Hadoop
	Olp: (Hello,1) (Hodoop,1) (Data,1)
	$(\omega \circ rid, 1)$ $(is, 1)$
	(Hello, 1 (Biq11)
	e (ita , 'sauta oniboat routa') pot-sioinos
_	Reduce phase ofp:-
-	(Hello12) (is11) 113
	(Worldin) (Bigin)
+	(Hadoop,2) (Data,1)
	conjoined (and anibase) and alores
~ O.6.	Write a note on mangable opm:
<u> </u>	1.) mongooie opm (object borg modering) is a
	popular library ulcdin Node je application
- dim	to interact with mongo DB database.
~	2.) It provides a structured way to define schemas
707	For mongons collection, making data handling
Journa	carier and more organized.
	3.) mongoore acts bridge between the opplication
	of the mongobs dotabase.
	4) It allows developers to create models based
1310736	on schema that define the structure of
	the do cument, datatypa, validation rule, &
	5:1: Managare and simplifie
	5.) mongooie opm simplific working with
112 /012	mongods in Hode js by providing ascheme- bourd solution, making database operation
	more efficient and reliable.
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1



D.1. what is curp? Explain the curp using node. is. CURD Stand for Create, Read, update and Deler There are four baile operations wedin databaser application to manage data: 1) Create (Intert Data): we can we the save () or create() method to inscredata eq conit user = require ('. Imodess / user'); const newser= newser (+ nome: 'John', age:21)}; new user. save() · then (() => console log ('user created')) · Cotch (err => console log (err)); 2.) Read (Fetch Data):we convic. fing() or find By ID() to read data. eg. User. Find() · then (user => console 109 (users) · cotch lerr => console log (errl); 3.) update (modify Dota):we can use update ones or find by InAnd updates toupdate data. 4.) Delete (Remove Doto):-We convie dereteoner or Find By Idand Deleter) to deletedata. What is node js? Explain file handling in node is. O 8 1.) Node js is on open-source, cross-platform, Tovalcript runtime environment that allows developed to run Jovatchipt code outlide of web browsee. 2.) Fait and Scalable 3.) Event - driven and non-placking Ilomodel

