

CS540 Advanced Database Administration

Nisarg Patel | 19619 Jenish Patel | 19549

Guided By: Prof. Bhaskar



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Why Online Business needed

What are some Challenges of Online Business



Plotting

Share Our data in chart form to represent the query

DBA Commands

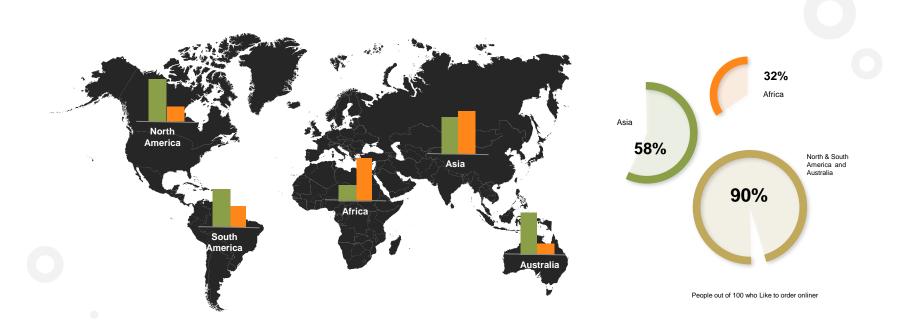
DELICIOUS FOOD PROJECT



Why Online business needed.



- Offers incredible scalability
- Provides limitless freedom
- High margins
- Expanding the Business



Vertical Chart

People Think about online business

When we ask the vendor's and shoppers about online business, eventually we heard different kind of opinion from different region.

The shoppers from North and South america, Europe and Australia like the online business where on the other hand the asia and africa shoper like their traditional way.





The Discounted Item based on the festival time or special events.



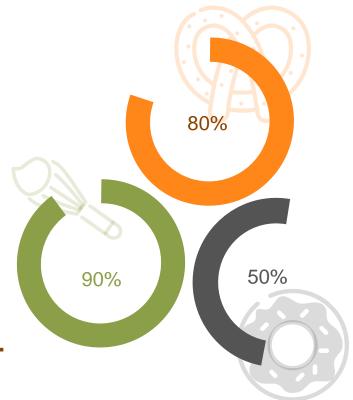
Dj's special dishes.



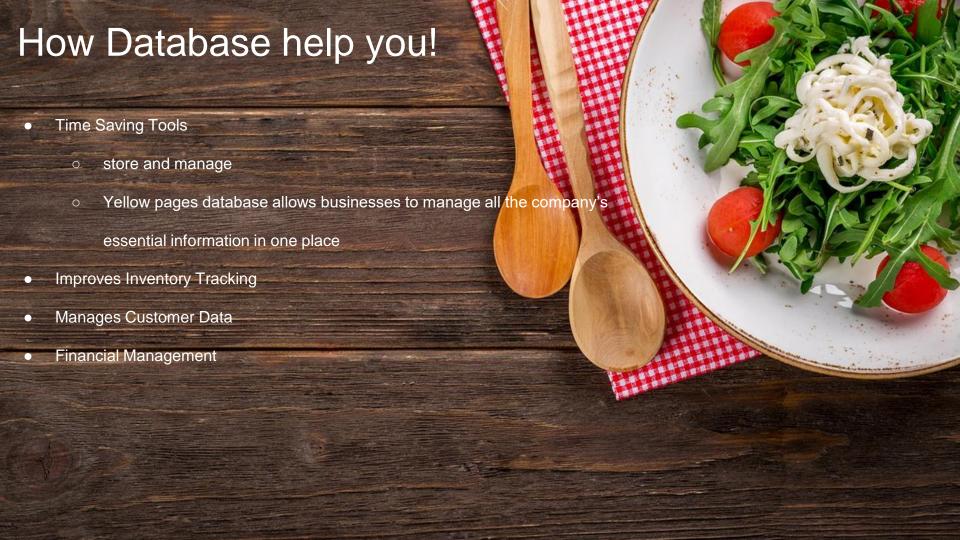
The common Snacks and The Indian and Punjabi Thali.

DOUGHNUT CHART

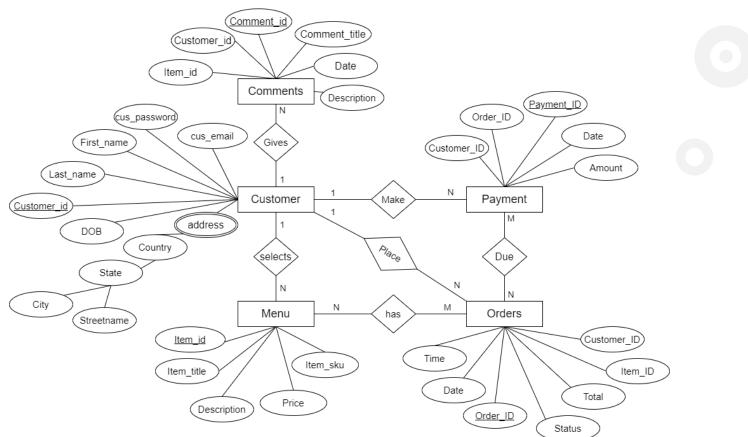
Customer's favorite dish from our menu.



*the data is based on 20 users count



ER Diagram



Database Table

==	customer >	<								
1	1 SELECT * FROM customer;									
Q	* customer_ic 💠	* customer_email varchar(255)	* customer_password varchar(255)	* customer_first_name varchar(255)	* customer_last_name varchar(255)	* customer_dob varchar(255) ◆	* customer_address varchar(255) ◆	* customer_city		
1		aman@gmail.com	test	Aman	Kumar	2021-10-15	gjhg	Mumbai		
2		sumit@gmail.com	test	Pawan	Kumar	2021-10-15	jhjk	Jaipur		
3		rahul@gmail.com	test	Rahul	Kumar	2021-10-08	jhg	Mumbai		
4		sumit@gmail.com	test	Sumit	Kumar	2021-10-16	jk	Delhi		
5		amit@gmail.com	test	Amit	Kumar	2021-10-26	gg1	Kanpur		

Q	* login_id int	* login_employee_id	* login_email varchar(255) ◆	* login_password varchar(255)	* login_level_id varchar(255)
1	1	1001	admin	test	1
2	2	1002	employee	test	2
3	37	36	hh	hh	2
4	39	38	hh	hh	1
5	41	40	hh	hh	2
6	43	42	hh	hh	2
7	45	44	hh	hh	1
8	47	46	hh	hh	1

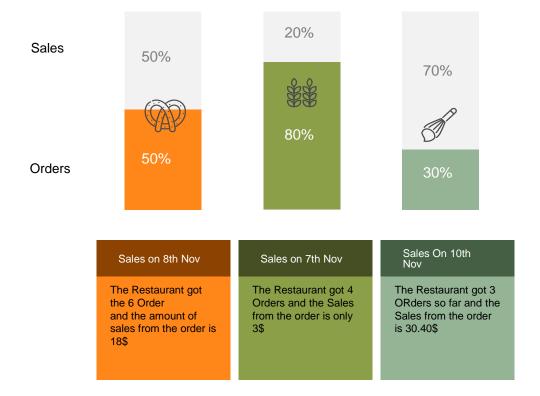
Database Table

Q	* comments_ \$	* item_id int •	* customer_id	* comments_title text	* comments_date varchar(255) ◆	* comments_descriptic text
1	1	1	1	My First Comment	2021-10-27	Multiply sea night grass
2	2	1	2	Multiply sea night grass	2021-10-27	Multiply sea night grass
3	3	1	3	Multiply sea night grass	2021-10-27	Multiply sea night grass
4	4	1	4	Multiply sea night grass	2021-10-27	Multiply sea night grass
5	5	1	5	Multiply sea night grass	2021-10-27	Multiply sea night grass
6	6	1	2	Multiply sea night grass	2021-10-27	Multiply sea night grass
7	7	1	2	Multiply sea night grass	2021-10-27	Multiply sea night grass
8	133	5	1	asasdf	2021-10-27	asdfadsf
9	139	10	5	I have no intention of le	2021-10-27	Unperturbed by the stin
10	199	7	5	asdf	2022-02-27	adfasdf
11	200	7	5	asdf	2022-02-27	asdf
12	279	10	5	Very good product	2022-03-12	This is very good produc

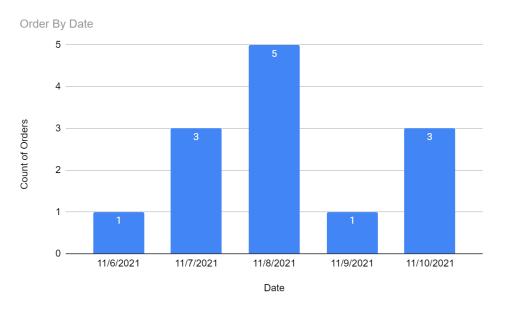
Database Table

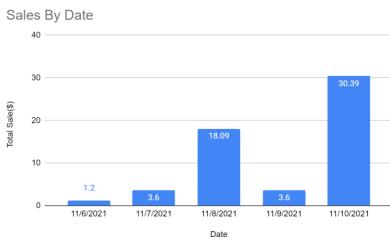
	payment X				
1	SELECT * FRO	OM payment	LIMIT 100;		
Q	* payment_id •	* order_id	* customer_id	* payment_date date	payment_amount float
1	165	5	1	2021-11-06	10000
2	166	5	2	2021-11-06	15000
3	167	5	3	2021-11-06	12000

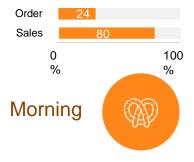
Sales Record

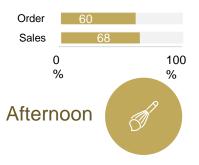


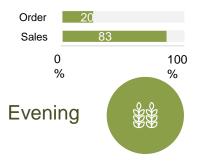
Orders and Sales By Date











Morning is the Rush hours,

Because the people are going to there work, the statics says the big orders for the lunch and the quick breakfast dishes are selling so fast

The afternoon is good for the lunch menu,

As per statics the afternoon Time the lunch dishes are making some nice amount of sell.

Evening and night for special dishes,

The states indicate the special dishes are more selected by customer.



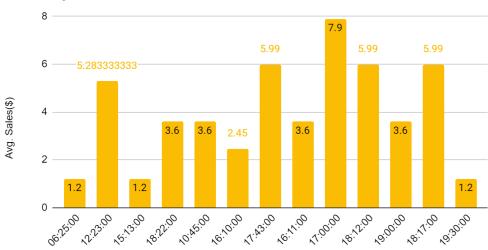
STACKED BAR

References:

https://docs.google.com/spreadsheets/d/1tmtbH1yyqKn5XsM5iqHgMJoAUM7HMrC mJ4Zl5kE7L9U/edit?usp=sharing



Sales by Time

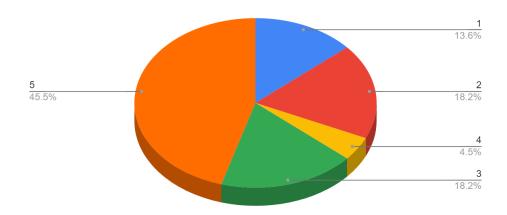


Time in 24H Formate

Donut Chart

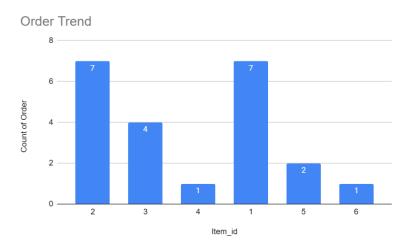
0

Orders Count By Customer_id



Which Customer Order the most

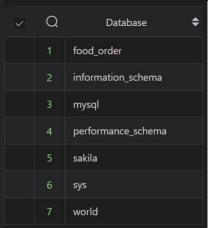
Which Order The Customers Like Most



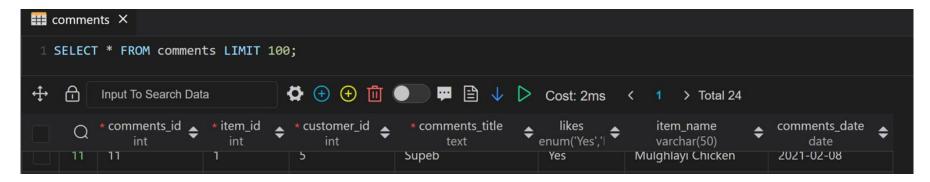
Time Duration is 3 hours

Creating the Database





Some Privileges using Mysql with VS



Create A User

User has a connect grant on a database

Default User Privileges

```
MySQL SQL > \connect jenish@localhost
Creating a session to 'jenish@localhost'
Please provide the password for 'jenish@localhost': ******
Save password for 'jenish@localhost'? [Y]es/[N]o/Ne[v]er (default No): y
Fetching schema names for autocompletion... Press ^C to stop.
Your MySQL connection id is 47 (X protocol)
Server version: 8.0.28 MySQL Community Server - GPL
No default schema selected; type \use <schema> to set one.
 MySQL localhost:33060+ ssl SQL >
           localhost:33060+ ssl SQL > show databases;
   Database
   information schema
   row in set (0.0022 sec)
          localhost:33060+ ssl SQL >
```

Set only limited access on database



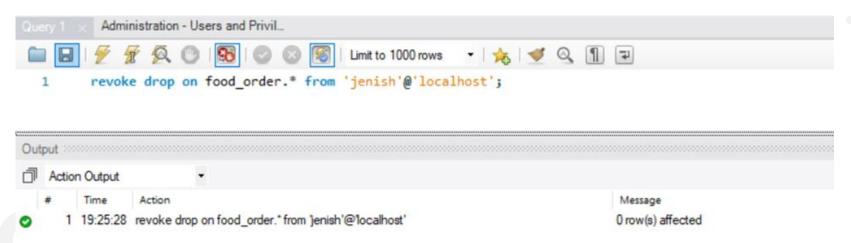
Grant database privilege

mysql> grant all on food_order.* to 'jenish'@'localhost'; Query OK, 0 rows affected (0.15 sec)

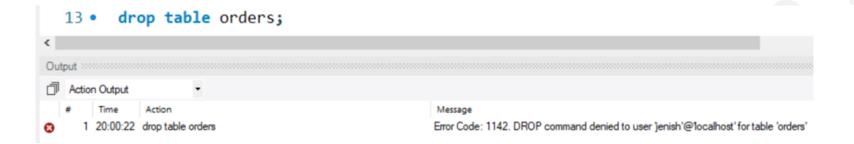
```
mysql> show grants for 'jenish'@'localhost';
 Grants for jenish@localhost
  GRANT USAGE ON *.* TO `jenish`@`localhost`
  GRANT ALL PRIVILEGES ON `food_order`.* TO `jenish`@`localhost`
2 rows in set (0.00 sec)
                                    MySQL localhost:33060+ ssl SQL show databases;
                                     Database
                                     food order
                                     information_schema
                                   2 rows in set (0.0397 sec)
```

Revoke Delete from new user

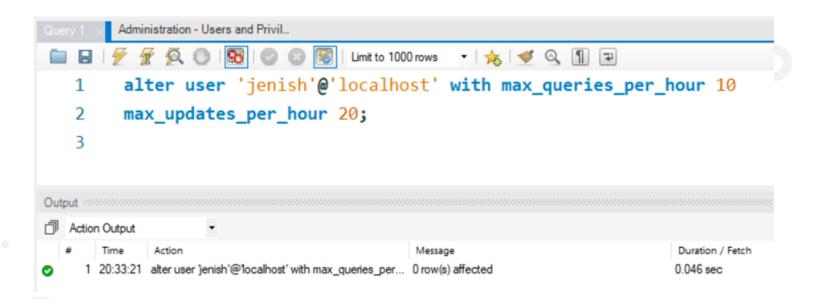
revoke delete on food_order.* from 'jenish'@'localhost';



Revoke Delete from new user



Set limited time access on database



Set limited time access on database

CREATE TABLESPACE food_order add datafile 'online_food_order.ibd';

7 | 18:36:42 | CREATE TABLESPACE food_order add datafile 'online_... | 0 row(s) affected

0.625 sec

List All Tablespace in the instance



~	Q	FILE_ID	\$	FILE_NAME
		20		./sakila/fts_0000000000000430_0000
	21	21		./sakila/fts_0000000000000430_0000
		22		./sakila/fts_0000000000000430_0000
	23	23		./sakila/inventory.ibd
	24	24		./sakila/language.ibd
	25	25		./sakila/payment.ibd
		26		./sakila/rental.ibd
	27	27		./sakila/staff.ibd
		28		./sakila/store.ibd
	29	29		./world/city.ibd
		30		./world/country.ibd
	31	31		./world/countrylanguage.ibd
	32	32		./world/category.ibd
		33		./world/comments.ibd
	34	40		./online_food_order/company.ibd
	35	43		./online_food_order/employee.ibd

Set only limited access on database

1 • select user from mysql.user Export: Wra user jenish mysql.infoschema mysql.session mysql.sys root

Memory Usages of all schema

```
SELECT s.schema name,
CONCAT(IFNULL(ROUND((SUM(t.data length)+SUM(t.index length))/1024/1024,2),0.00), "Mb") total size,
CONCAT(IFNULL(ROUND(((SUM(t.data_length)+SUM(t.index_length))-SUM(t.data_free))/1024/1024,2),0.00), "Mb") data_used,
CONCAT(IFNULL(ROUND(SUM(data free)/1024/1024,2),0.00), "Mb") data free,
IFNULL(ROUND((((SUM(t.data_length)+SUM(t.index_length))).SUM(t.data_free))/((SUM(t.data_length)+SUM(t.index_length)))3
FROM INFORMATION_SCHEMA.SCHEMATA s, INFORMATION_SCHEMA.TABLES t
WHERE s.schema name = t.table schema
           SCHEMA NAME
                                           total size
                                                                pct used
                                 6.45Mb
          sakila
                                                                    6.45Mb
                                                                                  0.00Mb
                                                                                                 100.00
                                                                                   140.00Mb
                                 2.63Mb
                                                                    -137.38Mb
                                                                                                 -5233.33
          mysql
          world
                                 0.80Mb
                                                                    0.80Mb
                                                                                  0.00Mb
                                                                                                 100.00
          online food order
                                 0.23Mb
                                                                    0.23Mb
                                                                                  0.00Mb
                                                                                                 100.00
                                 0.02Mb
                                                                    0.02Mb
                                                                                  0.00Mb
                                                                                                 100.00
          sys
          information schema
                                 0.00Mb
                                                                    0.00Mb
                                                                                  0.00Mb
                                                                                                 0.00
          performance_schema
                                 0.00Mb
                                                                    0.00Mb
                                                                                  0.00Mb
                                                                                                 0.00
```

Memory Usages of all Tables

```
SELECT s.schema_name, table_name,

CONCAT(IFNULL(ROUND((SUM(t.data_length)+SUM(t.index_length))/1024/1024,2),0.00),"Mb") total_size,

CONCAT(IFNULL(ROUND(((SUM(t.data_length)+SUM(t.index_length))-SUM(t.data_free))/1024/1024,2),0.00),"Mb") data_used,

CONCAT(IFNULL(ROUND(SUM(data_free)/1024/1024,2),0.00),"Mb") data_free,

IFNULL(ROUND((((SUM(t.data_length)+SUM(t.index_length))-SUM(t.data_free))/((SUM(t.data_length)+SUM(t.index_length)))*100),2),0) pct_used

FROM INFORMATION_SCHEMA.SCHEMATA s, INFORMATION_SCHEMA.TABLES t
```

~	Q	SCHEMA_NAME 💠	TABLE_NAME	total_size 💠	data_used ♦	data_free ♦	pct_used 💠
	30	online_food_order	feedback	0.03Mb	0.03Mb	0.00Mb	100.00
	31	online_food_order	orders	0.03Mb	0.03Mb	0.00Mb	100.00
	32	sakila	actor	0.03Mb	0.03Mb	0.00Mb	100.00
	33	online_food_order	company	0.02Mb	0.02Mb	0.00Mb	100.00
	34	online_food_order	customer	0.02Mb	0.02Mb	0.00Mb	100.00
	35	online_food_order	employee	0.02Mb	0.02Mb	0.00Mb	100.00
	36	online_food_order	login	0.02Mb	0.02Mb	0.00Mb	100.00
	37	online_food_order	menu	0.02Mb	0.02Mb	0.00Mb	100.00
	38	world	category	0.02Mb	0.02Mb	0.00Mb	100.00
	39	world	comments	0.02Mb	0.02Mb	0.00Mb	100.00
	40	sakila	category	0.02Mb	0.02Mb	0.00Mb	100.00

Find Out the Redo Log file from Innodb

SHOW ENGINE INNODE STATUS

```
LOG
Log sequence number
                             30972250
Log buffer assigned up to
                             30972250
Log buffer completed up to
                             30972250
Log written up to
                             30972250
Log flushed up to
                             30972250
Added dirty pages up to
                             30972250
Pages flushed up to
                             30972250
Last checkpoint at
                             30972250
2569 log i/o's done, 0.00 log i/o's/second
```

Buffer Pool and Memory

```
BUFFER POOL AND MEMORY
Total large memory allocated 0
Dictionary memory allocated 512459
Buffer pool size 511
Free buffers
                  233
Database pages
                  270
Old database pages 0
Modified db pages 0
Pending reads
Pending writes: LRU 0, flush list 0, single page 0
Pages made young 0, not young 0
0.00 youngs/s, 0.00 non-youngs/s
Pages read 20548, created 374, written 5810
0.00 reads/s, 0.00 creates/s, 0.00 writes/s
No buffer pool page gets since the last printout
Pages read ahead 0.00/s, evicted without access 0.00/s, Random read ahead 0.00/s
LRU len: 270, unzip_LRU len: 0
I/O sum[2]:cur[0], unzip sum[0]:cur[0]
```

Track The Errors

```
LATEST FOREIGN KEY ERROR
2022-04-08 16:25:17 0x3370 Transaction:
TRANSACTION 5429, ACTIVE 0 sec updating or deleting, thread declared inside InnoDB 4999
mysql tables in use 1, locked 1
4 lock struct(s), heap size 1128, 2 row lock(s), undo log entries 1
MySQL thread id 11, OS thread handle 13168, query id 669 localhost 127.0.0.1 root updating
DELETE FROM orders WHERE order_id=261
Foreign key constraint fails for table `online_food_order`.`payment`:
  CONSTRAINT `payment ibfk 1` FOREIGN KEY (`order id`) REFERENCES `orders` (`order id`)
Trying to delete in parent table, in index PRIMARY tuple:
DATA TUPLE: 9 fields;
0: len 4; hex 80000105; asc
1: len 6; hex 00000001535; asc
2: len 7; hex 020000013a07b9; asc : ;;
3: len 4; hex 80000005; asc ;;
4: SQL NULL;
5: SQL NULL;
6: len 4; hex 50616964; asc Paid;;
7: len 3; hex 8fcb66; asc f;;
8: SQL NULL;
But in child table `online_food_order`.`payment`, in index order_id, there is a record:
PHYSICAL RECORD: n_fields 2; compact format; info bits 0
0: len 4; hex 80000105; asc
1: len 4; hex 800000a6; asc
```

