BHARATI VIDYAPEETH's COLLEGE OF ENGINEERING,
LAVALE, PUNE-15

DEPARTMENT: ELECTRONICS AND TELECOMMUNICATION

Unit Test-1

Subject: Database Management

Time: 1Hour **Max. Marks: 25**

Instructions to the candidates:

1. **Answer any four questions each carry 5 marks.**
2. **Draw appropriate diagrams wherever required.**

Q.1 **Explain in detail the users of Database Management System.**

Q.2 **Explain in detail any one applications of Database Management System.**

Q.3 **Explain in detail ACID properties.**

Q.4 **Define: 1.Instance 2.Strong Entity 3.Weak Entity 4.Relation,Attributes,Tuples 5.Degree,Cardinality**

Q.5 **Explain SELECT; , PROJECT; , RENAME; , INTERSECT operators with example and syntax.**

Q.6 **Explain Data Abstraction, PRIMARY KEY, FOREIGN KEY.**

END

Prof. A.S. Pathak
Subject Coordinator

Prof. A.B. Wani
HOD

Bharati Vidyapeeth's

COLLEGE OF ENGINEERING

Lavale, Tal. : Mulshi, Dist. Pune- 412 115.

Name of the Student Snehal S. Bhagat

Class : TE Roll No. : 09 Div. :

Subject : DBMS Test : Unit Test-1

Day : Friday Date: 11/08/23 Subject Teacher : A.S. Pathak mam

Name and Sign. of the Jr. Supervisor

Q. No.	1	2	3	4	5	6	7	8	Total	Signature
Marks Obtained	4	4	4	3	1				16/20	

1. Define i] Degree ii] tuple and attribute iii] weak entity iv] Relational Instance v] Relation, schema.

2. Explain usees of DBMS

3. Explain Acid properties in detail.

4. With respect to attribute, tuple, relation. and an example explain primary key.

5. Explain in detail one application of data base

6. Explain library management system Specifing
→ relation, attribute, tuple, entity-relationship diagram.

E-R- diagram.

Ans

1. Degree :-

The no of attribute in a relation is known as degree of the relation. i.e. no of columns is said to be the degree for that relation.

ii] Tuple :-

The rows in a table is known as tuple. i.e. rows or records is said to be tuple of that relation.

iii] attributes :-

The columns in a relation is said to be the attribute for that relation

iv] Relation :-

The table of having rows and columns i.e. tuple and attributes together known as relation.

v] Schema :-

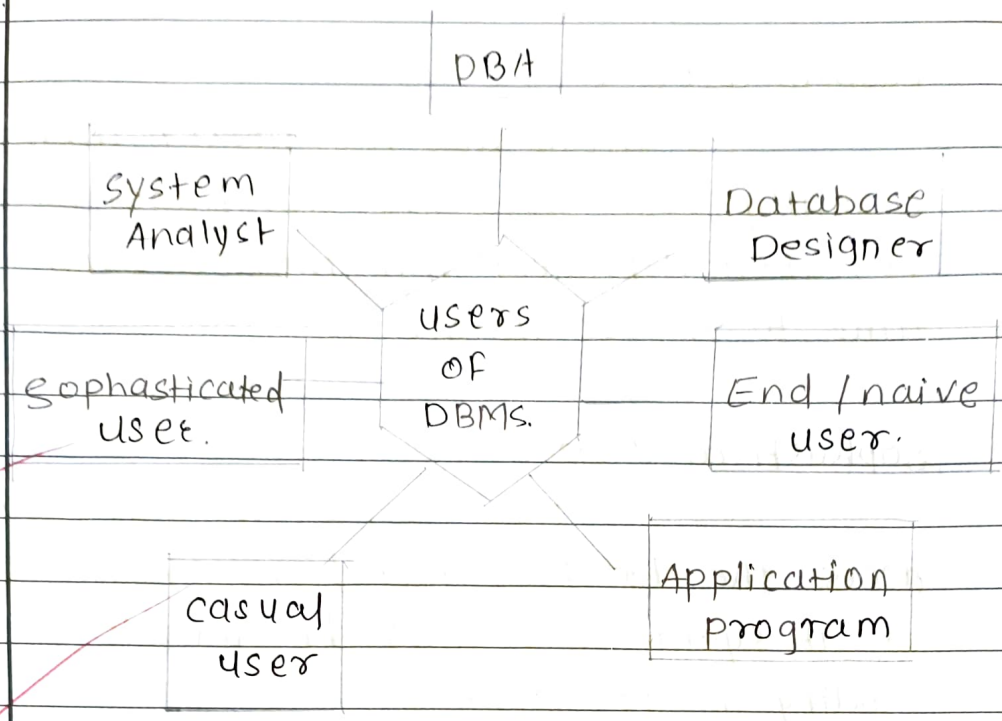
the table formed together of a tuples and attribute is the schema for the relation.

vi] Weak Entity :-

The entity which depends on strong entity for its existance is known as weak entity. It represent with the double rectangle.

Ans.

2.



The User's of DBMS are as follows

i] Database Designer :-

This person is responsible for designing the database and implementing all the required modifications.

ii] End / Naive user :-

These persons are the one who do not have any knowledge of DBMS but uses the DBMS application frequently to get desired results.

iii] Application program :-

It is the person who writes the code for the program application and he is also the computer professional.

casual user :-

these are the person who casually ~~user~~ uses the Database and required different information each time to access data base.

Sophasticated user :-

These person who sometimes access the database but have knowledge about system and data he can also modify in the database.

System Analyst :-

The person who looks after all the another users of the dbms tries to solve the query related to the database and also modify the database.
He do not write code for the program application.

DBA :-

DBA is a database administrator who co-ordinate all other user for the database ~~mag~~ managing. He also look after the ~~system~~ failure due to hardware and software system failure.
He can access the database anytime also create i.d and password for the user to access the database.

Ans 3

3 ACID properties can be explained as the important feature in database.

A = Atomicity
C = Consistancy
I = Isolation
D = Dueability.

i] Atomicity :-

Atomicity refers to ~~the~~ whether the transaction takes place or not occurs at all. i.e. the atomicity property is all about commit and abort.

commit = This means the transaction occurs successfully and the changes is visible in a database.

Abort = This means the transaction is failed and the changes is not visible in the database.

ii] Consistancy :-

This property refers to the integrity constraint to the database i.e. there must be the consistancy after the transaction has occured this gives the correctness to the database.
and the transaction remains successful.

iii] Isolation :-

This property refers to the transaction occured. i.e many more than one transaction can be occured at a time, it gives isolation or peevent from getting it failed and to occured it successfully.

iv] Durability :-

This property refer to the storage of every transaction into the disk or in the database. it maintains the record of every transaction made therefore the entry is given and the data get stored and not get lost even in any type of failure.

3

Ans 4. Primary key :-

- primary key is a attribute which has its unique identity in a relation.
- there is only one primary key in a table.
- the primary key is a unique and no duplicate value is there.
- primary key should not be null for any of the record in a relation.
- primary key is only one in a relation which represent uniqueness about any da

- primary key is used to refer the data that can be use in another relation as a reference.
- primary key represent only each record to be unique from other.

example.

Loan [Relation]

Loan_no	Name	repayments
1	Rohan	5000
2	shree	2000
3	Jaya	3700
4	Rohan	3700.

here the loan is relation.
loan_no, Name and repayments are the attribute for relation.
and each record of Names, loan_no, and repayment is the tuple for the relation.
Loan_no is a primary key.

Ans

5. Application of database managements are as follows

If Railway reservation management systems etc.

Here

In railway reservation system no of users access the site at a time there fore we need database to manage all the records of the tickets reservation As many user access the site at a time we need database to avoid crisis among the users.

here we can raised query for the inconvinence and it get resolved by the system expert at the back end.

The user who access the data base or railway reservation site as for booking tickets are the End users

The records of ticket reservation is kept for long in the database it do not get reset or erased due to any failure.

the DBA looks after all the co-ordinator for system management

In this way the railway reservation management system be the application OF DBMS

Bharati Vidyapeeth's

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Lavale, Tal. : Mulshi. Dist. Pune- 412 115.

Name of the Student Isha Gorksh khedkar

Class : Third Year Roll No. : 19 Div. : ENTC

Subject : Database management Test : 01

Day : friday Date: 11/08/23 Subject Teacher : Prof. Pathak mam.

Name and Sign. of the Jr. Supervisor

Q. No.	1	2	3	4	5	6	7	8	Total	Signature
Marks Obtained	3 1/2	1 1/2	3	3	2 1/2	—	—	—	13 1/2 / 20	

Q.1) Define : 1) degree 2) Tupple and attribute 3) weak entity 4) ~~sfton~~ Relational instance 5) Relation, schema

Q. 2) Explain the users of database mangment.

Q.3) Explain ACID properties in details.

Q.4) W.R.T attribute, tuple, relation, and an example explain primary key.

Q.5) Explain in detail One application of database.

Q.6) Explain library mangement system specifying and draw E-R diagram.

relation, tuple attribute

Q.1) i) Degree :- The degree in database mangement is defined as no. of columns in the table.
OR the no. of ~~tuples~~ attributes present in an relation

ii) Tuple and attributes :-
The tuple in database mangement is defined as one row in the data.
attributes in database mangement is defined as a column of a table.

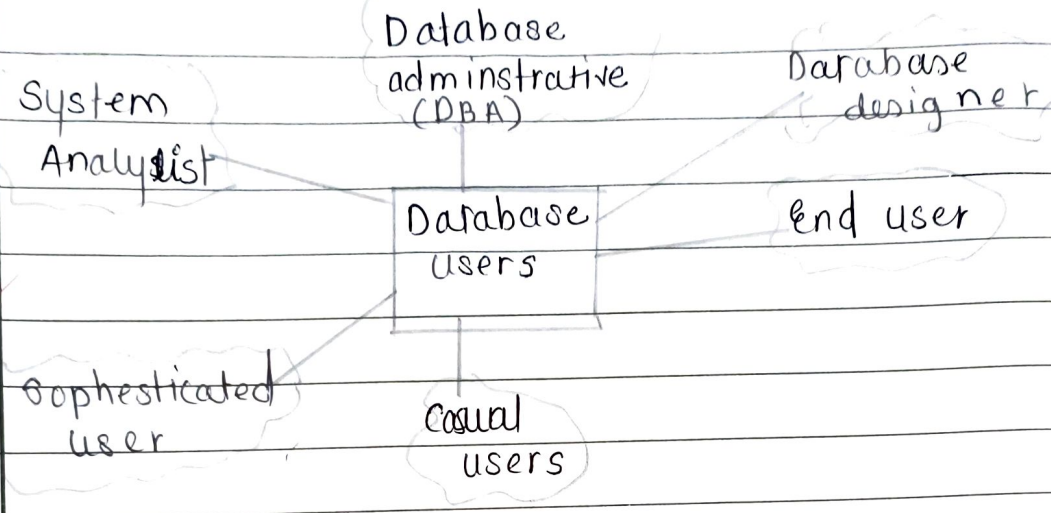
iii) Weak entity :-
- A weak entity is an entity that cannot be uniquely determined by it's attribute alone.
- It is the partial discrement key.
- represented by double rectangle.
- needs strong entity to relay on.

iv) Relational instance :-
-

v) Relation :- Relation in database is nothing but the table which is followed by attribute, tuples etc.

Schema :-

Q.2) Users of database :-



1) Database adminstrative :- DBA is a special who has access of all the data or one who defines schema. 2) He has control on every 3 levels of database 3) He/she can access the data by creating a username & password by DBA.

2) Database designer :-

ACID properties :-

The ACID properties stands for.

A	Automicity
C	Consistency
I	isolation
D	Durability

- Automicity :- This means the entire transcition takes place at one place only or doesn't happens at all
- Consistency :- This means the integrity should maintain throughout the data.
- database is consistent before & after the transcation
- isolation :- The ensures to stop the multi-trasaction taking place in the data.
transaction should be happen ~~identip~~ independently without interference
- Durability :- the transcation has completed and execution is updated to the database mangement and stored in and written to desk.

Q.4) primary key :-

- It is the key which shows the unique attribute in the given relation.
- It's value can't be NULL
- It ensures that the no values are repeated.
- For, example :-
  In Bank, the account number is a primary key as it doesn't have the repeated values or NULL values.

Attributes

Account_No	F.Name	L.Name	Bank name
08562xxx7	Manisha	Patil	State Bank of India
09926xxx7	Suresh	Shinde	State Bank of India
3262xxx8	Ramesh	Powar	State Bank of India.

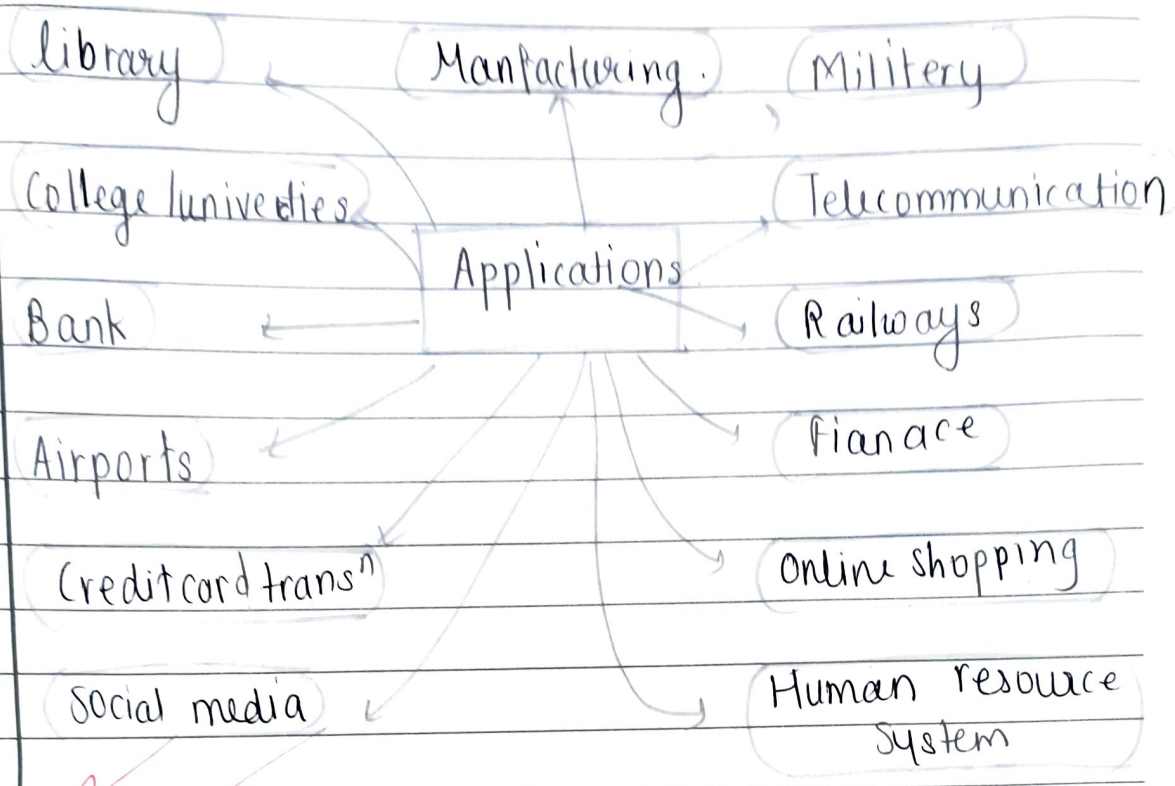
Relation
Tuple

- key features of primary key :-

Primary key
- Uniqueness
- NO NULL values
- Indexing

Q5

→ Application of database managment.

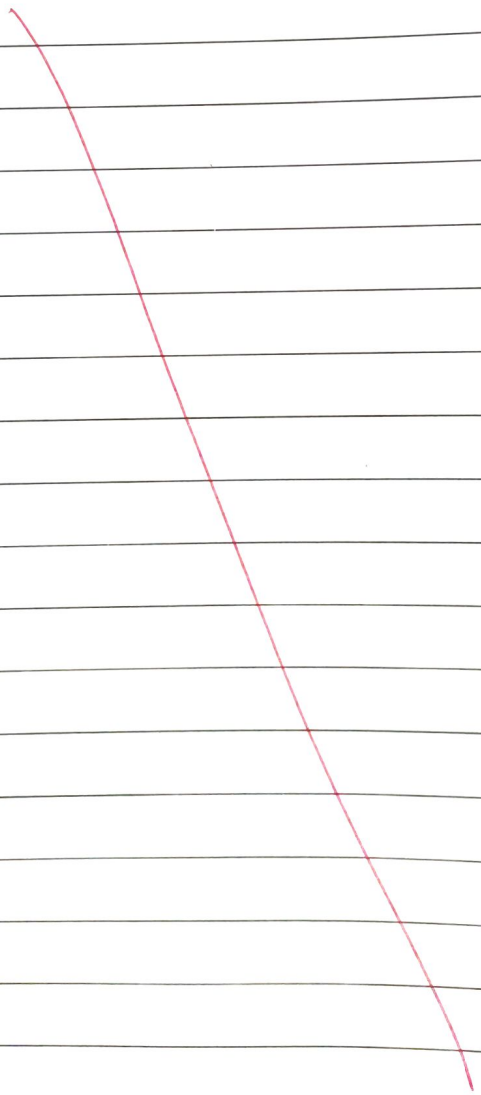


→ In, Bank

- the database managment system is use widely as the datas in bank are of huge amount to store in.
- It is impossible to store the data in files
- The data, such as account no, transn, credit cards even this all can handle by using database mangement systems.

Q.6) BVLIB:

LIB-NO	YEAR	BRANCH	LName	FName
01	S.E	ENTC	Patil	Shenal
02	B.E	Mech		
03	T.E	civil		



BHARATI VIDYAPEETH'S COLLEGE OF ENGNEERING LAVALE PUNE

SECOND YEAR E & Tc. Engg.

STUDENT ROLL CALL LIST 2022-2023

Class TE (E&TC)

11/8/23 Subject : DBMS Marks 20 Time : 1 hrs

Roll No	Student's Name	Sign	20
—	AATAR ARBAJ AHMAD		AB
08	ADITYA AJAY GAJAPURE	Aditya	6
—	ADMILE OM BALASAHEB	AB	
—	AJABE SHREENIWAS ASHOK	AB	
31	AUTADE POOJA KHANDU	Autade	
09	BHAGAT SNEHAL SANDIP	Bhagat	15
10	BHANDARE KRUSHANA N.	KBhandare	6½
35	BHATKAR SHUBHAM MILIND	Bhatkar	
11	BHATLAWANDE VAISHNAVI V.	Vaishnavi	12
21	BHOGAWADE TRUPTI SANJAY		half
	BHURE PREETI UTTAM	Bhure	5
32	BONDE SHRUTI GAJENDRA	Bonde	6
—	BURUDE ADITYA KIRAN	AB	
37	CHAUDHARI NISHCHAL GIRISH	Nhadly	
38	CHAVANKE KAVERI VILAS	Kchavank	
—	DAUNDE SHIVAM GAJANAN	AB	
3	DESHMUKH DARSHAN RAOSAHEB		
—	DEVAGIRE PRATIK DNYANDEO	AB	
—	DHAIGUDE ADITYA RAJESH	AB	
12	DHOK SHRIKANT RAJENDRA	Dhok	6
39	GARULE PRATIKSHA BABAN		4
52	GATE HARSHAL BHARAT		
24	JAHAGIRDAR PARTH VASUDEV		
15	JANHVI KIRAN JADHAV	J.J.Jadhav	6½
40	JASUD NEHA VITTHAL	Jasud	3½
16	KADAM SHIVANJALI SUNIL	Kadam	7
57	KADLAG SAMARTH VIJAY	Kadlag	
13	KALARIYA DARSHKUMAR R.		8
—	KALE SOPAN SUNIL	AB	
54	KAPSE SNEHAL BABA	Kapse	
—	KHANDAVE SAURAV VIJAYKUMAR	AB	
58	KHATRI SHARDA KISHOR	Khatri	3
19	KHEDKAR ISHA GORKSH	Ishakhedkar	13½
—	KUSALKAR ABHIJEET LAXMAN	AB	
—	MAHADIK SHUBHAM SOPAN	AB	

05	MALI ATHARVA ANIL	Amali	5
41	MANDALE NAVAJYOT VASANT	Amandale	07
17	MOHITE SAYALI JAGADISH	Smohite	6½
—	MULAGE GANESH SHASHIKANT		AB
42	MUNGILWAR KALYANI S.	Kalyani	4
14	NAGDIVE TANISHKA SUNIL	Tnagdive	02
—	PALLAVI BAPU NARUTE		AB
	PATIL CHETAN KISHOR		3½
—	PATIL YASH KHANDERAO		AB
—	PAWAR AMIT ARJUN		AB
—	PAWAR RUSHIKESH GANESH		AB
61	PIDATHAL SAHIL MANOHAR	sahil	07
—	PRATIK ADHIKRAO MAHADIK		AB
48	PRATIKSHA S. SURYAWANSHI	Ruyal	7
28	RASKAR SWAPNIL DADABHAU		6
6	ROKDE GANESH KACHRU	Rokde	8
43	RUSHIKESH SHINDE	Shinde	06
—	SAHU KRISHNA GANESH		AB
—	SALUNKE HARHSVARDHAN P.		AB
—	SAPKE SUBODH KRISHNA		AB
56	SARODE SIDDHI SHIVAJI	~~Siddhi~~	12
—	SASWADE SUYASH DATTATRAY		AB
02	SAVJI PRATIK NILESH	Savji	6
—	SHAH AAKASH NILESH		AB
—	SHAIKH ATIK SAMEER		AB
53	SHAIKH SUFIYAN SHAIKH SADIQUE	Sufiyan	01
36	SHARMA CHANDAN SHAMBHU		8
20	SHETE ANURADHA BALASAHEB	Ashuli	6½
	SHINDE ADITYA BAPU		11½
50	SHINDE RUTUJA BRAMHAJI	Rutuja	10½
—	SHINDE VIVEK KRISHNAT		AB
33	SONAWANE GANESH B.		09
59	SUKASHE JAYA SOMNATH		12
47	VIBHA VINOD OVHAL	Vishal	6
	WADGHULE GANESH RAJARAM	Ganu	8½

Apat Naik
11/8/23

Head
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