

Practical - 1 (1 Lab)

1. What is DBMS? Explain advantages of DBMS over FPS.
2. List 15 applications of Database. Explain how Database can be helpful in managing any 3 applications.
3. Create the Database for the following:
 - A. Student Details using Excel.
 - B. Employees Details using MS Access.
 - C. Facebook using Excel.

1. A Database Management System (DBMS) is software that allow user to store, manage, retrieve, and control data efficiently in a structured way. it act as an interface between user/applications and the database, ensuring data is organised, secure and consistent.

examples:-

- mysql
- Oracle database
- Microsoft SQL server

Advantages of DBMS over FPS

- ① Reduce data redundancy :- In DBMS there is control on duplication of data while in FPS same data may be stored in multiple files.
- ② Better Data Consistency :- In DBMS, updates in data reflects everywhere while in FPS changes in one file may not update others.
- ③ Improved Data Security :- DBMS provides passwords, user roles, and access control while FPS have limited security.
- ④ Data Integrity :- DBMS enforces rules (constraints) but FPS have no proper integrity control.

① Backups and Recovery :- DBMS can backup automatic but in FPS manual backup required.

② Ans :- These are the 15 application of DBMS.

- (1) ATM management System
- (2) Stock market/Trading System
- (3) Online food delivery System
- (4) Ride-sharing system.
- (5) movie Ticket Booking System.
- (6) Online learning platforms
- (7) Customer Relationship Management System
- (8) Supply chain management system
- (9) manufacturing management System
- (10) Real Estate management System
- (11) Sports Tournament management System
- (12) Courier & Logistic System
- (13) vehicle registration System
- (14) Content management System
- (15) Hotel management system

Movie Ticket Booking System

A database helps in

- storing movie details (name, timing, theatre).
- managing seat availability.
- Preventing double booking
- Handling Online Payment
- Generating booking history

DBMS allows real-time updates, so when one person books a seat, it becomes unavailable instantly.

Customer Relationship management

A database helps in

- Storing customer contact details
- Tracking sales history
- Managing customer complaints
- Analyzing customer behaviour
- Generating reports for Business decision.

DBMS helps companies improve customer service and increase sales.

ATM management System

A database helps in

- storing account information
- authentication & security
- Tracking Transaction
- Real-time Balance update

3. (A) Student details using excel.

Student

| GR_NO | Name | Course | Phone_no | Enrollment-no |
|--------|---------------|-----------|------------|---------------|
| 792288 | Satyam Kumar | CSE | 9999988888 | 925000001101 |
| 869432 | Rahul Tiwari | CSE | 7777766666 | 10110000529 |
| 679248 | Santanu Raj | CSE | 5555544444 | 73200001234 |
| 592616 | Yuvraj Singh | CSE-AI/ml | 4843567890 | 95276000129 |
| 781245 | Gopal Krishna | MBBS | 9786534201 | 86646232001 |

(B) Employee Details using ms Access.

| Emp ID | Emp name | Designation | City | Gender |
|--------|------------------|--------------------|---------------|--------|
| 001 | Sundar Pichai | CEO | California | male |
| 002 | Shantanu Narayan | CEO CTO | California | male |
| 003 | Sam Altman | CHRO | San-francisco | male |
| 004 | Elon musk | CFO | Astra lity | male |
| 005 | Asmita Dubey | CMO | California | female |

(C) Facebook using Excel

| Username | followers | following | Post |
|-------------------------|-----------|-----------|------|
| Nahi_batunga | 100 | 130 | 17 |
| Kyo_karoge_jaan_ke | 1700 | 180 | 500 |
| Kyo_nahi_ho_sahi_Padhai | 1.9k | 11 | 783 |