PLACEMENTS AND TRAININGS DATA BASE MANAGEMENTS SYSTEM

DATABASE MANAGEMENT SYSTEMS
Subject code – 5CS05

COURSE BASED PROJECT

VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY
Bachupally, Hyderabad – 500 090
An Autonomous Institute

Computer Science and Engineering department
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DECLARATION

The **course based project** titledPLACEMENTS AND TRAINING DATA BASE MANAGEMENT SYSTEMhas been executed under the Guidance of Dr.C.Kiran Mai, as per the academic requirements at VNR VJIET. To the best of our knowledge we were able to design and implement, while understanding the key concepts of the subject, DataBase Management System. We are indebted to the support and motivation extended by HOD and faculty of the department, in completing our project.

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Introduction

Database Management system is a collection of interrelated and persistent data. It's a set of application Programs used to access, update and manage data.

The goal of DBMS is to provide an environment that is both convenient and efficient to use in

i) Retreving information from DB and ii) Storing information into DB.

Databases are designed to manage large repository of information. This involves

i) Definition of structures for information storage (Data Modeling)
ii) Provision of mechanisms for the manipulation of information (file and system structure, query processing).
iii) Providing safety of the information in the database (Crash Recovery and security).
iv) Concurrency control when system is shared by multiple users.

PURPOSE OF DATABASE SYSTEM:

1. To see why DBMS is necessary, consider a typical example of the file processing system supported by a conventional operating system.
   Application is employee database in an institute :
   i) Employee details, salary payment, classes handled are kept in the permanent system files.
   ii) Application programs are written to manipulate files to perform the following tasks:
      a) List the total employee in the institute.
      b) List the subjects handled by the faculty.
      c) List the lab courses assisted by the operators.
      d) Generate the monthly statement of salaries paid.
2. Development of the system proceeds as follows:
   i) New application Programs to be written as need arises.
   ii) New permanent files are to be created as required.
   *iii) **But** over a long period, each file may be of a different format, and*
   iv) Application programs may be in different languages.
3. There are problems with the file processing system
   i) Data Redundancy and inconsistency
      a) Same files duplicated at several places.
      b) All copies are not updated properly.
   ii) Difficulty in accessing the data
      May have to write a new application program to satisfy an unusual request.
      Eg: Find the faculty with the same postal code.
   iii) *Data isolation*: Because data are scattered in various files, and files may be in different formats, writing new application programs to retrieve the appropriate data is difficult.
   iv) *Atomicity Problems*.

v) *Concurrent access anomalies*:
   a) Concurrency is required for faster response time.
   b) Protection from concurrent updates.

vi) Security
Every user is able to handle the complete data. Restricted access cannot be applied.
Eg: Payroll details to be viewed by accounts department only.
This is difficult to enforce through an application program.

vii) Integrity problems
Difficulty in enforcing the constraints to automatically check the input or modification of data.

Advantage of DBMS

- No redundant data – Redundancy removed by data normalization
- Data Consistency and Integrity – data normalization takes care of it too
- Secure – Each user has a different set of access
- Privacy – Limited access
- Easy access to data
- Easy recovery
- Flexible

Disadvantages of DBMS:

- DBMS implementation cost is high compared to the file system
- Complexity: Database systems are complex to understand

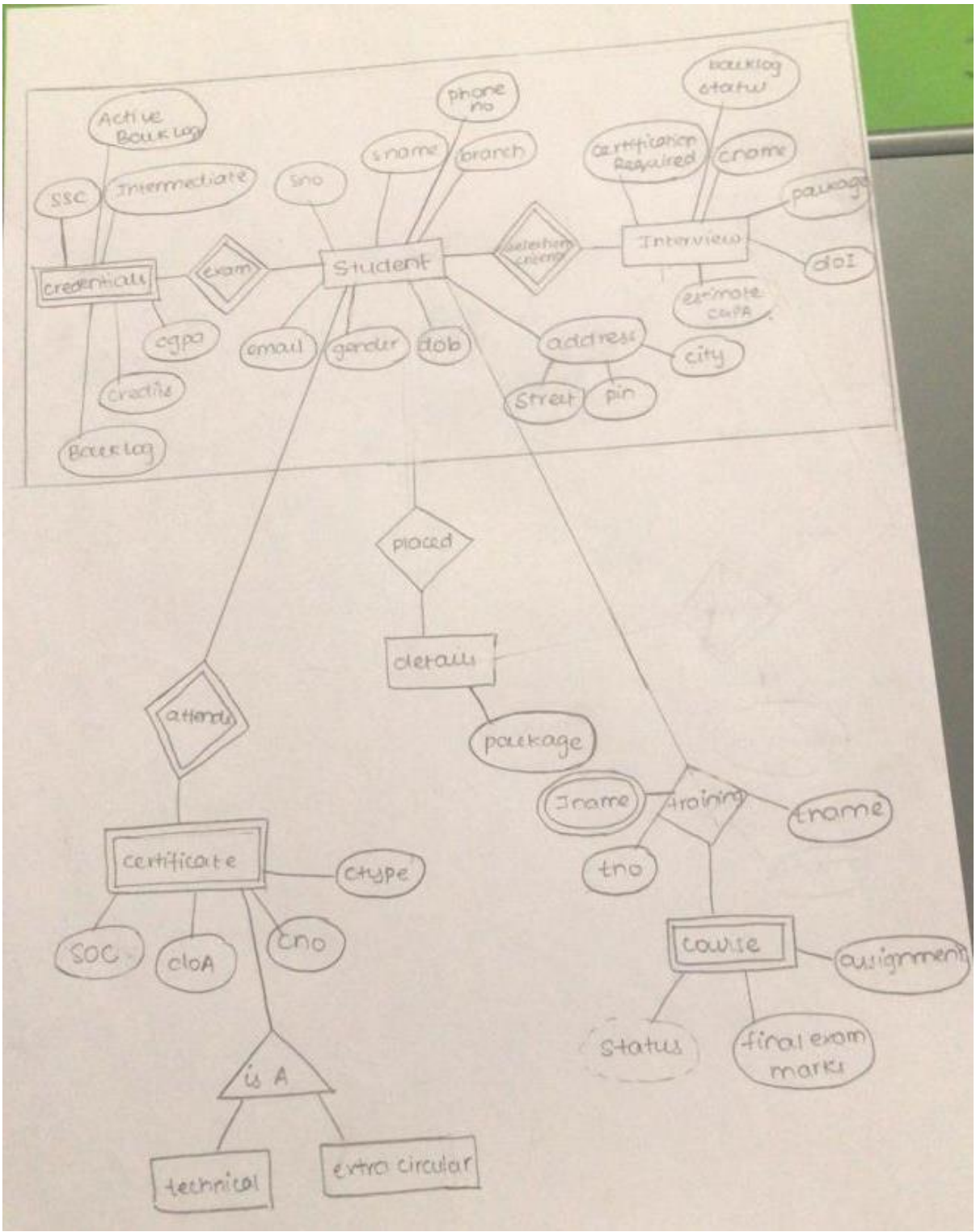
Performance: Database systems are generic, making them suitable for various applications. However this feature affects their performance for some applications

Problem Definition

The main objective of the Training and Placement Management System is to manage the details of Training, Student, Technical Skill, Placement, Placement Cell. It manages all the information about Training, CGPA Mark, backlogs, certifications, packages and company details, Training etc. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Training, Student, CGPA Mark and Technical Skill. It tracks all the details about the Technical Skill, Placement, assignments etc.

The application is reduced as much as possible to avoid errors while entering the data.it also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. Training and Placement Management system, as described above, can lead to secure, reliable and fast management system.it can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.

ER-DIAGRAM


Active Backlog
phone no
backlog status
SSC
Intermediate
sno
sname
branch
certification Required
cname
package
credentials
exam
Student
selected/not selected
Interview
doI
estimate CTC
cgpa
email
gender
dob
address
city
street
pin
backlog
placed
details
attends
package
certificate
ctype
Iname
training
tname
tno
SOC
cloA
cno
course
assignment
Status
final exam marks
is A
technical
extra circular

SCHEMA

1. Students (sno, sname, phno, branch, gender, dob, email)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
SNO	CHAR	10	PRIMARY KEY
SNAME	VARCHAR	25	-
PHNO	NUMBER	10	-
Branch	Varchar	5	-
Gender	Char	1	m/f
Dob	Date	-	<sysdate
Email	Varchar	35	-

2. Credentials (sno, ssc, intermediate, cgpa, credits, backlogs, status of backlog)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
SNO	CHAR	10	FOREIGN KEY
SSC	NUMBER	3,1	>=0 AND <=10
Intermediate	Number	3,1	>=0 AND <=10
Cgpa	Number	3,1	>=0 AND <=10
Credits	Number	2	-
Backlogs	Number	2	-
Status of backlogs	Char	1	y/n

3. Eligible (sno, cname, doi)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
SNO	CHAR	10	FOREIGN KEY
Cname	Varchar	25	Foreign key
Doi	Date	-	-

4. Interview (cname, package, backlogs status, certifications required, estimated cgpa)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
Cname	Varchar	25	Primary key
Package	Number	10	-
Backlogs status	Char	1	y/n
Certification required	Varchar	25	-
Estimated cgpa	Number	3,1	>=0 and <=10

5. Certificate (sno, soc, doa, cno, ctype, technical/extracurricular)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
SNO	CHAR	10	FOREIGN KEY
Soc	Varchar	50	-
Doa	Date	-	<sysdate
Cno	Number	20	Primary key
Ctype	Varchar	30	-
Technical/extraurricular	Char	1	t/e

6. Details (sno, cname, package)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
SNO	CHAR	10	FOREIGN KEY
Cname	Varchar	25	Foreign key
Package	Number	10	-

7. Trainings (tno, tname)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
Tno	Number	5	Primary key
Tname	Varchar	25	-

8. Instructor (tno, iname)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
Tno	Number	5	Foreign key
Iname	Varchar	25	-

9. Courses (tno, assignmentmarks, final exam score)

COLOUMN	DATA TYPE	WIDTH	CONSTRAIN
Tno	Number	5	Foreign key
Assignmentmarks	Number	3	>=0 and <=30
Finalexamscore	Number	3	>=0 and <=70

SQL QUERIES

1. Display student details.

Query: select * from students;

2. Give the names of students who are eligible for placements.

Query: select sname from students where sno IN (select sno from credentials where cgpa>7.5);

3. Give the email Id’s of students and company name who have interview on ‘23-oct-20'.

Query: select email , cname from students s , eligibility e where s.sno=e.sno and doi=’23-oct-20';

4. List the names of companies,package it offers and required gpa.

Query: select cname,package ,required gpa from interview;

5. List the training programmes details.

Query: select tno,tname,instructor name from trainings t,instructor I where t.tno=I.tno;

6. List the certificates each student has got.

Query: select sname,cname,ctype from students s,certificate c where s.sno=c.sno;

7. Name the company which offers highest package?

Query: select cname from interview where package=(select max(package) from interview);

8. Give the names of students who placed with highest package.

Query: select s.sname from students s,details d where s.sno=d.sno and d.package =(select max(package) from details);