

**Subject: Database System Laboratory(CS57L)** 

Project topic: student admission database

Sem: 5th

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#### 1.Introduction

#### 1.1 Background

During the process of admission we have to gather students' all requirement information and should be stored. As multiple aspects of the students data must be shared for various tasks, this data is often shared via email and stored redundantly in excel spreadsheets across the department. This manner of storage often leads to hardships with regards to how the data was managed, updated, and shared; when data needs to be updated, all copies must be updated manually with great care so that out of date information is not kept and recirculated through the system.

#### **1.2 Goal**

The objective of this project is to create a database to centrally handle the information of all students in a college, and to provide access to this information with an easy to use webbased interface that can be accessed by any device with basic html rendering capabilities.

#### **1.3 DBMS**

DBMS stands for Database Management System. Database is a collection of data and Management System is a set of programs to store and retrieve those data. Based on this we can define DBMS like this: DBMS is a collection of inter-related data and a set of programs to store and access those data in an easy and effective manner.

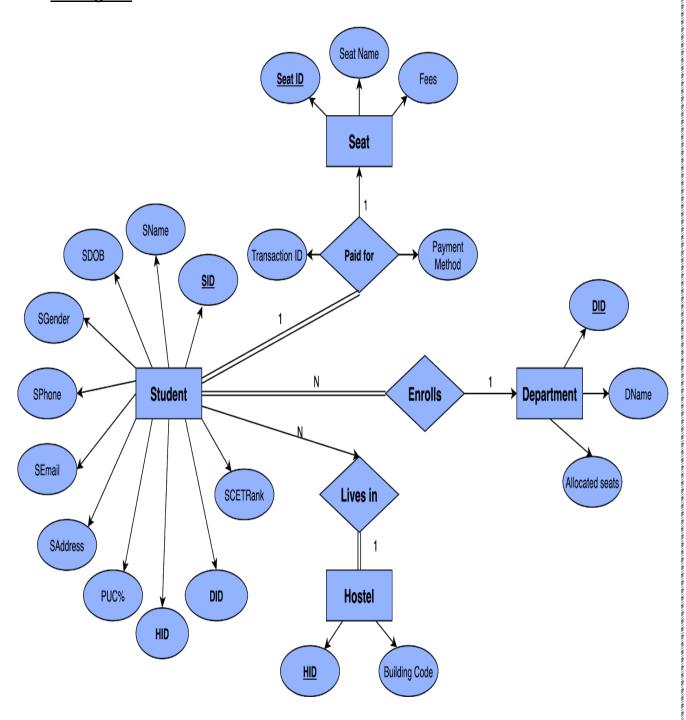
Database system are basically developed for large amount of data. When dealing with huge amount of data, there are two things that require optimization: Storage of data and retrieval of data. According to the principles of database systems, the data is stored in such a way that it acquires a lot less space as the redundant data(duplicate data) has been removed before storage.

#### 1.4 MySQL

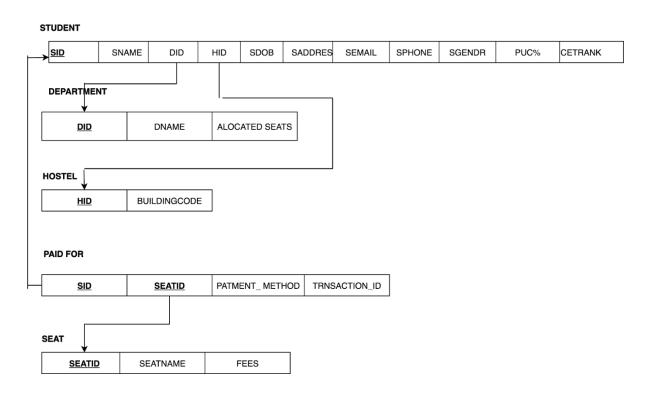
MySQL is multithreaded, multi user SQL database management System (DBMS). The basic program run as server providing multiuser access to a number of databases. The project's source code is available under terms of the GNU General Public Licence, as well as under a variety of property arguments. MySQL is a database. The data in a MySQL is stored in a Database objects called tables. A table is a collection of related data entries and it consists of columns and rows. The databases are useful when storing information categorically. MySQL is a central components of the LAMP open source web application software stack (and other "AMP" stacks). LAMP is an acronym for Linux, Apache, MySQL, Perl/PHP/ Python. Application that use the MySQL database include TYP03, MODx, Joomla, WordPress, PHPBB, MyBB and Drupal.

# 2.DESIGN

# 2.1 ER diagram



# 2.2 Schema diagram



#### 2.3 DDL STATEMENTS.

```
CREATE TABLE DEPARTMENT
DID VARCHAR(10) PRIMARY KEY,
DNAME CHAR(10),
ALLOCATEDSEATS INT DEFAULT 0
);
CREATE TABLE HOSTEL
HID VARCHAR(10) PRIMARY KEY,
BUILDINGCODE VARCHAR(10)
);
CREATE TABLE STUDENT
SID INT PRIMARY KEY auto increment,
SNAME CHAR(20),
DID VARCHAR(10),
HID VARCHAR(10),
SDOB DATE,
SADDRESS VARCHAR(20),
SPHONE VARCHAR(20),
```

```
SMAIL VARCHAR(30),
SGENDER VARCHAR(10),
PUCPER FLOAT,
CETRANK INT,
FOREIGN KEY(DID) REFERENCES DEPARTMENT(DID) ON DELETE SET NULL ON UPDATE
CASCADE,
FOREIGN KEY(HID) REFERENCES HOSTEL(HID) ON DELETE SET NULL ON UPDATE CASCADE
alter table student auto increment = 1800;
CREATE TABLE SEAT
SEATID VARCHAR(10) PRIMARY KEY,
SEATNAME VARCHAR(20),
FEES FLOAT
);
CREATE TABLE PAIDFOR
SID int,
SEATID VARCHAR(10),
PAYMENTMETHOD CHAR(20),
TRANSACTIONID VARCHAR(10),
PRIMARY KEY(SID, SEATID),
FOREIGN KEY(SID) REFERENCES STUDENT(SID) ON DELETE CASCADE ON UPDATE CASCADE,
FOREIGN KEY(SEATID) REFERENCES SEAT(SEATID) ON DELETE CASCADE ON UPDATE
CASCADE
);
alter table DEPARTMENT
add constraint check(ALLOCATEDSEATS<=60);
2.3.1 Inserting tuples to department table and hostel table
INSERT INTO DEPARTMENT(DID, DNAME) VALUES('CS1', 'CSE');
INSERT INTO DEPARTMENT(DID, DNAME) VALUES('EC1', 'ECE');
INSERT INTO DEPARTMENT(DID, DNAME) VALUES('ME1', 'ME');
INSERT INTO DEPARTMENT(DID, DNAME) VALUES('IS1', 'ISE');
INSERT INTO HOSTEL VALUES('H001','A BLOCK');
INSERT INTO HOSTEL VALUES('H002','H BLOCK');
INSERT INTO HOSTEL VALUES('H003','GH BLOCK');
```

INSERT INTO HOSTEL VALUES('H004', 'MESS BLOCK');

### 2.4 Triggers

A database trigger is procedural code that is automatically executed in response to certain events on a particular table or view in a database. The trigger is mostly used for maintaining the integrity of the information on the database. For example, when a new record (representing a new worker) is added to the employees table, new records should also be created in the tables of the taxes, vacations and salaries. Triggers can also be used to log historical data.

values to student table ##

delimiter \$\$

CREATE TRIGGER INCREMENT1 AFTER INSERT ON STUDENT FOR EACH ROW

1.## this trigger increment allocated seats in corresponding department after inserting the

update DEPARTMENT

set ALLOCATEDSEATS = ALLOCATEDSEATS +1

where

begin

new.DID = DEPARTMENT.DID;

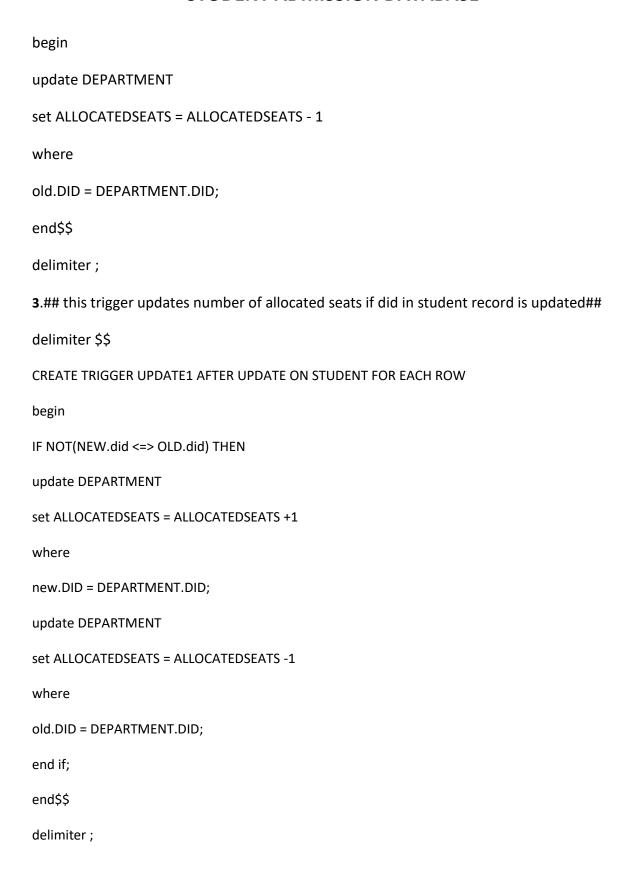
end\$\$

delimiter;

**2.**## this trigger decrement number of allocated seats in corresponding department if student record is deleted##

delimiter \$\$

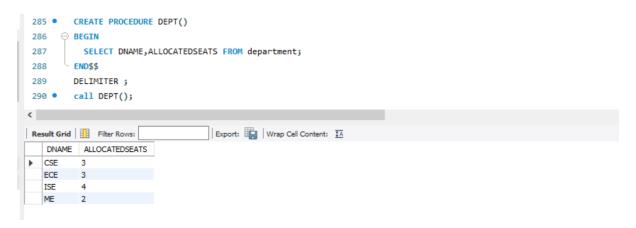
CREATE TRIGGER DECREMENT1 AFTER DELETE ON STUDENT FOR EACH ROW



```
ysql> USE ADMISSION;
Database changed
mysq1> SELECT * FROM DEPARTMENT;
                  DNAME ! ALLOCATEDSEATS
                                                           0
                  ISE
ME
                                                            0
0
   rows in set (0.05 sec)
mysql> INSERT INTO STUDENT(SNAME,DID,HID,SDOB,SADDRESS,SPHONE,SMAIL,SGENDER,PUCP
ER,CETRANK>VALUES('SAGAR','CS510','H001','2000-02-20','RAICHUR','8265994892','sa
g@gmail.com','MALE',91.8,1800>;
Query OK, 1 row affected (0.26 sec)
mysql> INSERT INTO STUDENT(SNAME,DID,HID,SDOB,SADDRESS,SPHONE,SMAIL,SGENDER,PUCP
ER,CETRANK> VALUES('VINOD','ME510','H002','1999-12-10','GOKAK','9767894532','vin
od@gmail.com','MALE',89.5,2200);
Query OK, 1 row affected (0.22 sec)
 nysq1> SELECT * FROM DEPARTMENT;
                  DNAME : ALLOCATEDSEATS
   DID
    CS510
                  CS E
ECE
                                                            100
    EC510
   rows in set (0.00 sec)
 nysql> _
```

#### 2.5 stored procedures.

A stored procedure is a prepared SQL code that you can save, so the code can be reused over and over again. So if you have an SQL query that you write over and over again, save it as a stored procedure, and then just call it to execute it. You can also pass parameters to a stored procedure, so that the stored procedure can act based on the parameter value(s) that is passed.



here we created a procedure dept() to select information from department table.so when we call that procedure it will display information as shown in the above figure.

# **3.QUERIES**

Queries are used to retrieve the stored information from the database. This is performed by using select statements.

### Example:

select \* from student ## gives all values stored in the student table.

SID	SNAME	DID	HID	SDOB	SADDRESS	SPHONE	SMAIL	SGENDER	PUCPER	CETRANK
1801	ROHIT	CS1	H001	1999-10-30	MYSURU	8765894532	rohit@gmail.com	MALE	93.8	1200
1802	SAGAR	CS1	H001	2000-02-20	RAICHUR	8265994892	sag@gmail.com	MALE	91.8	1800
1803	VINOD	ME1	H002	1999-12-10	GOKAK	9767894532	vinod@gmail.com	MALE	89.5	2200
1804	UCNAM	ME1	H002	1999-10-30	DHARWAD	7865846732	manju@gmail.com	MALE	94	1576
1805	VISHAL	CS1	H002	2000-09-07	HONNAVAR	6758945328	raj@gmail.com	MALE	95.3	1277
1806	MITHALI	EC1	H004	1999-11-28	CHENNAI	7645894523	mithali@gmail.com	FEMALE	88	2100
1807	SMRITI	EC1	H004	2000-10-10	DAVANGERE	9764894532	smriti@gmail.com	FEMALE	94	2600
1808	XAVIER	EC1	H001	2000-03-14	KARWAR	789694532	xavi@gmail.com	MALE	89	2500
1809	RAHUL	IS1	H003	2000-01-30	BELAGAVI	8756349872	rahul@gmail.com	MALE	96	1600
1810	MOHIT	IS1	H003	1999-12-28	MYSURU	8904584405	mohit@gmail.com	MALE	93	2277
1811	VIDYA	IS1	H004	2000-02-10	SHIMOGGA	9845673832	vidya@gmail.com	FEMALE	93.8	1450
1813	sagar	CS1	H001	2020-12-15	mattur	6363224242	sagar@gmail.com	MALE	95	6000

## 3.1 Nested queries

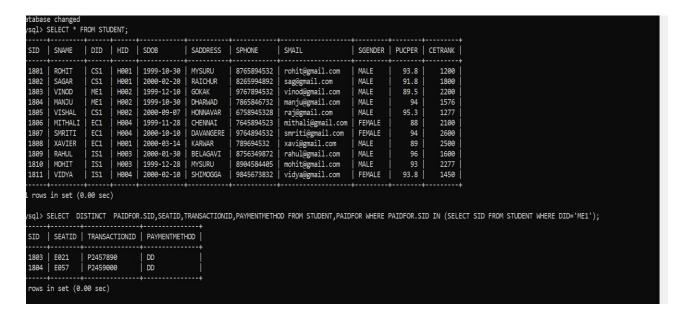
It connects two or more tables to retrieve the data.

### example:

1. The query to retrieve all the student who joined for computer science department:-

SID   SNAME	DID	HID	SDOB	SADDRESS	SPHONE	SMAIL			CETRANK
1801 ROHIT	CS1	H001	1999-10-30	MYSURU	8765894532	rohit@gmail.com	MALE	93.8	1200
1802 SAGAR	CS1	H001	2000-02-20	RAICHUR	8265994892		MALE	91.8	1800
1803   VINOD	ME1	H002	1999-12-10	GOKAK	9767894532	vinod@gmail.com	MALE	89.5	2200
1804 MANJU	ME1	H002	1999-10-30	DHARWAD	7865846732		MALE	94	1576
1805 VISHAL	CS1	H002	2000-09-07	HONNAVAR	6758945328		MALE	95.3	1277
1806   MITHALI	EC1	H004	1999-11-28	CHENNAI	7645894523	mithali@gmail.com	FEMALE	88	2100
1807   SMRITI	EC1	H004	2000-10-10	DAVANGERE	9764894532	smriti@gmail.com	FEMALE	94	2600
1808   XAVIER	EC1	H001	2000-03-14	KARWAR	789694532	xavi@gmail.com	MALE	89	2500
1809   RAHUL 1810   MOHIT	IS1 IS1	H003 H003	2000-01-30   1999-12-28	BELAGAVI MYSURU	8756349872 8904584405		MALE MALE	96 93	1600   2277
1810   MOHIT 1811   VIDYA	IS1	H003   H004	2000-02-10	SHIMOGGA	9845673832	monit@gmail.com   vidya@gmail.com	FEMALE	93.8	1450
TOTT   ATDIA	131	1004	2000-02-10	SUTINOGRA	90430/3032	vidya@gmaii.com	FEMALE	93.0	1450
rows in set (0. sql> SELECT SNA+ SNAME   SID  + ROHIT   1801			STUDENT WHERE	DID IN (SEL	ECT DID FROM (	DEPARTMENT WHERE DNAI	ΛΕ='CSE');		

2.Query to get the payment information of the students who joined for mechanical department:-



#### 4.IMPLEMENTATION

### 4.1 Prototype using HTML,CSS,PHP

#### home.html

```
<!Doctype html>
<html>
<head>
<title>JSS STU</title>
<link rel="shortcut icon" href="fav.ico">
<link href="css/styles home.css" rel="stylesheet">
<style media="screen">
 .pic{
  width: 700px;
  height: 500px;
  float: left;
  border-radius: 30px;
  margin-right: 30px;
}
p{
 padding: 20px;
font-size: 20px;
font-family: cursive;
color: #0a5a73;
}
</style>
</head>
<body >
<div style="background-color:white;" class="">
<header align="center">
<img src="logo-for-web-site.jpg" alt="JSS-STU" width ="250px">
</header>
<nav>
<a href="home.html">HOME</a>|
<a href="admission.php">ADMISSION</a>|
<a href="search.php">STUDENT INFO</a>
</nav>
</div>
<div class="container">
 <div class="homepic">
 <img class="pic" src="JSS.jpg" alt="jss pic">
 </div>
 >
```

Sri Jayachamarajendra College of Engineering which was the dream child of Dr Sri Sri Shivarathri Rajendra Mahaswamigalavaru the 23rd pontiff of Suttur Matt was officially inaugurated in 1963 by Dr. T. M. A. Pai, who was the then Chairman of the Manipal Academy of Higher Education.<br/>
Sr>Courses in Civil, Electrical and Mechanical Engineering branches were started first. The first batch of engineering graduates completed their course in 1968.

Electronics and Communication branch of engineering was introduced in 1968 followed by bachelor's degree in Instrumentation in 1978, Computer Science and Engineering during 1982, Polymer Science and Technology in 1992 and Information Science and Engineering in the year 2000.

```
</div>
<footer >
<b>Contact us:</b>
8791209876
official@jssstu.in
</footer>
</body>
</html>
admission.php
<!DOCTYPE html>
<html lang="en" dir="ltr">
<head>
 <meta charset="utf-8">
<title>Admission</title>
 <link rel="stylesheet" href="css\styles.css">
 <style media="screen">
body{
   margin:0px
}
 nav{
   padding:10px;
   margin-bottom: 2px;
  text-align: center;
   background:#f06623;
}
footer{
   margin-top: 25px;
   border-top: 1em solid #0a5a73;
   background:#f06623;
```

```
padding:6px;
   color: white;
}
a{
   text-decoration: none;
   color: white;
   padding: 15px;
}
a:hover{
  color: f06623;
}
 .top{
  background-color: white;
  margin-bottom: 25px;
 </style>
</head>
<body >
<div class="top">
<header align="center">
<img src="logo-for-web-site.jpg" alt="JSS-STU" width ="250px">
 </header>
<nav >
<a href="home.html">HOME</a>|
<a href="admission.php">ADMISSION</a>|
 <a href="search.php">STUDENT INFO</a>
</nav>
</div>
<?php
if(isset($_POST['button_1'])){
$servername = "localhost";
$username = "root";
$password = "openmysql";
$database = "admission";
// Create connection
$conn = new mysqli($servername, $username, $password,$database);
// Check connection
if ($conn->connect_error) {
die("Connection failed: " . $conn->connect_error);
}
$sname = $_POST["sname"];
$smail = $_POST["smail"];
$sphone = $_POST["sphone"];
```

```
$sdob = $_POST["sdob"];
$sgender = $_POST["sgender"];
$address = $_POST["address"];
$hid = $_POST["hid"];
$did = $ POST["did"];
$pucper = $_POST["pucper"];
$cetrank = $_POST["cetrank"];
$seatid = $ POST["seatid"];
$paymethod = $_POST["paymethod"];
$tranxid = $_POST["tranxid"];
$sql = "INSERT INTO student
SNAME,
DID,
HID,
SDOB,
SADDRESS,
SPHONE,
SMAIL,
SGENDER,
PUCPER,
CETRANK)
VALUES
('$sname','$did','$hid','$sdob','$address','$sphone','$smail','$sgender','$pucper','$cetrank')";
if ($conn->query($sqI) === TRUE) {
  $sid = $conn->insert_id;
} else {
  echo "Error: " . $sql . "<br>" . $conn->error;
}
if($sid){
$sql = "INSERT INTO paidfor (SID,
SEATID,
PAYMENTMETHOD,
TRANSACTIONID
)
VALUES ('$sid','$seatid','$paymethod','$tranxid')";
if ($conn->query($sqI) === TRUE) {
  echo "<script>alert('New record created successfully');</script>";
} else {
  echo "Error: " . $sql . "<br>" . $conn->error;
}
}
}
?>
<div class="window">
  <h2>Student Admission</h2>
```

```
<form class="" action="" method="post">
 <div class="">
  <input type="text" name="sname" value="" required>
  <label class="float" for="">Name</label>
 </div>
 <div class="">
  <input type="email" name="smail" value="" required>
  <label class="float" for="">Email</label>
 </div>
 <div class="">
  <input type="text" name="sphone" value="" required maxlength="10">
  <label class="float" for="">Ph Number</label>
 </div>
 <div class="sele">
  <label for="">Date of Birth</label>
  <input type="date" name="sdob" value="" required max="2003-01-01">
 </div>
 <div class="sele">
  Gender:
  <input type="radio" id="male" name="sgender" value="MALE" checked>
  <label for="male">Male</label>
  <input type="radio" id="female" name="sgender" value="FEMALE">
  <label for="female">Female</label>
  <input type="radio" id="other" name="sgender" value="OTHER">
  <label for="other">Other</label>
 </div>
 <div class="">
  <input type="text" name="address" value="" required>
  <label class="float" for="">Address</label>
 </div>
 <div class="sele">
  <label for="did">Department:</label>
  <select name="did" id="" required>
   <option disabled >
   Choose Department
   </option>
   <option value="CS510">Computer Science and Engineering/option>
   <option value="EC510">Electronics and Communication Engineering/option>
   <option value="IS510">Information Science and Engineering</option>
   <option value="ME510">Mechanical Engineering/option>
  </select>
 </div>
 <div class="sele">
```

```
<label for="">Hostel:</label>
<select name="hid" id=""required>
  <option disabled >
  Choose Department
  </option>
  <option value="LOCAL"selected>No,Localite</option>
  <option value="H001">A Block
  <option value="H002">H Block</option>
  <option value="H003">GH Block</option>
  <option value="H004">Mess Block</option>
</select>
</div>
<div class="">
<input type="text" name="pucper" value="" required>
<label class="float" for="">PUC %</label>
</div>
<div class="">
<input type="text" name="cetrank" value="" required>
<label class="float" for="">CET-Rank</label>
</div>
<div class="sele">
<label for="">Seat:</label>
<select name="seatid" id="" required>
 <option disabled >
  Choose Department
  </option>
  <option value="E021"selected>Aided</option>
  <option value="E057">Unaided</option>
  <option value="E060">COMED-K</option>
  <option value="E070">Payment</option>
  <option value="E080">Others
</select>
</div>
<div class="sele">
Payment Method:
<input type="radio" id="dd" name="paymethod" value="DD" checked>
<label for="dd">DD</label>
<input type="radio" id="neft" name="paymethod" value="NEFT">
<label for="neft">NEFT</label>
<input type="radio" id="others" name="paymethod" value="Others">
<label for="others">OTHERS</label>
</div>
<div class="">
<input type="text" name="tranxid" value="" required maxlength="15">
```

```
<label class="float" for="">Transaction ID</label>
</div>
<input type="submit" name="button_1" value="Submit">
<input type="reset" name="button_2" value="Reset">
</form>
</div>
</div>
<footer >
<b>Contact us:</b>

8791209876
official@jssstu.in
</ro>
</footer>
</body>
</html>
```

### search.php

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
 <head>
  <meta charset="utf-8">
  <title>Search</title>
  <link rel="stylesheet" href="css/styles.css">
  <style>
  .window {
  width: 1000px;
  text-align: center;
}
body{
  margin:0px
}
table,th,td{
border: double;
 padding: 10px;
}
th{
color: darkred;
nav{
  padding:10px;
  margin-bottom: 2px;
  text-align: center;
```

```
background:#f06623;
}
footer{
  margin-top: 2px;
  border-top: 1em solid #0a5a73;
  background:#f06623;
  padding:6px;
  color: white;
  position: relative;
  top: 207px;
}
a{
  text-decoration: none;
  color: white;
  padding: 15px;
}
a:hover{
color: darkred;
}
.top{
background-color: white;
margin-bottom: 25px;
}
</style>
 </head>
 <body >
  <div class="top">
  <header align="center">
  <img src="logo-for-web-site.jpg" alt="JSS-STU" width ="250px">
  </header>
  <nav>
  <a href="home.html">HOME</a>|
  <a href="admission.php">ADMISSION</a>|
  <a href="search.php">STUDENT INFO</a>
  </nav>
  </div>
  <div class="window">
   <h2>Search Student!</h2>
   <form class="" action="" method="GET">
    <div class="">
     <input type="search" name="sid" value=""required>
     <label for="sid" class="float">Student ID</label>
    </div>
    <input type="submit" name="button_1" value="Search">
    <!-- <input type="submit" name="button_2" value="Delete"> -->
```

```
</form>
<div style="display: inline-block;">
<?php
/* Attempt MySQL server connection. Assuming you are running MySQL
server with default setting (user 'root' with no password) */
$link = mysqli connect("localhost", "root", "openmysql", "admission");
// Check connection
if($link === false){
 die("ERROR: Could not connect. " . mysqli connect error());
}
if(isset($ GET['button 1'])){
$sid=$_GET['sid'];
// Attempt select query execution
$sql = "SELECT * FROM display where SID='$sid'";
if($result = mysqli_query($link, $sql)){
 if(mysqli num rows($result) > 0){
   echo "";
     echo "";
       echo "Sid";
       echo "Name";
       echo "Gender";
       echo "Mail";
       echo "Address";
       echo "Ph No.";
       echo "PUC %";
       echo "CET Rank";
       echo "DNAME";
       echo "HOSTEL Block";
     echo "";
   while($row = mysqli fetch array($result)){
     echo "";
       echo "" . $row['SID'] . "";
       echo "" . $row['SNAME'] . "";
       echo "" . $row['SGENDER'] . "";
       echo "" . $row['SMAIL'] . "";
       echo "" . $row['SADDRESS'] . "";
       echo "" . $row['SPHONE'] . "";
       echo "" . $row['PUCPER'] . "";
       echo "" . $row['CETRANK'] . "";
       echo "" . $row['DNAME'] . "";
       echo "" . $row['BUILDINGCODE'] . "";
     echo "";
   }
```

```
echo "";
    // Free result set
    mysqli_free_result($result);
  }
  else{
    echo "No records matching your query were found.";
}
// Close connection
mysqli_close($link);
?>
</div>
  </div>
  <footer >
  <b>Contact us:</b>
  8791209876
  official@jssstu.in
  </footer>
 </body>
</html>
```

### **HOME Page**



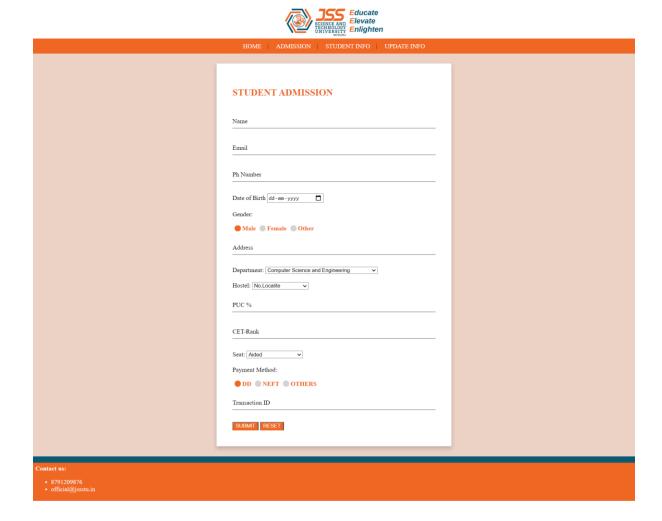


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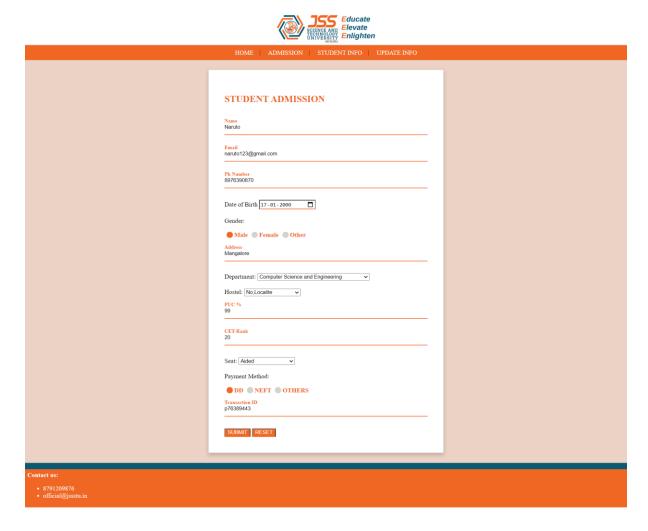
Courses in Civil, Electrical and Mechanical Engineering branches were started first. The first batch of engineering graduates completed their course in 1968. Electronics and Communication branch of engineering was introduced in 1968 followed by bachelor's degree in Instrumentation in 1978, Computer Science and Engineering during 1982, Polymer Science and Technology in 1992 and Information Science and Engineering in the year 2000.

## **ADMISSION Page**

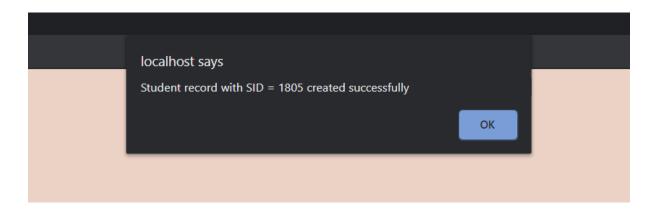
On clicking ADMISSION in the navigation bar of the HOME page we land on ADMISSION PAGE.



# Filling form with valid details



On filling with valid details and clicking submit a new student is admitted successfully.



### Searching.

On clicking STUDENT INFO on navigation bar we land on Search page where we can search student details using his Student ID



On successful search it returns a table containing all details about the student.



### Updating.

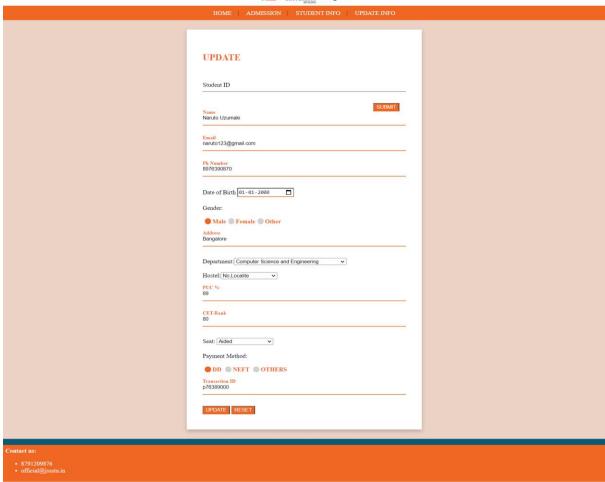
If the student old records are changed it should be updated.like new department name ,phone number address etc.so we use update command.

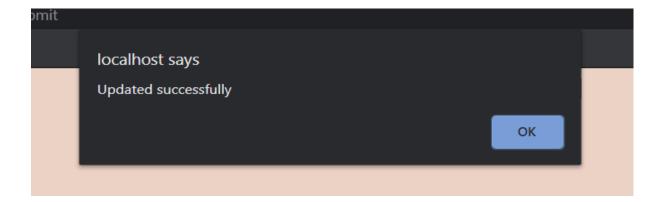




After entering valid Student ID a form opens up with all information filled by user previously. Now required changes can be made and updates will be saved.







-----THANK YOU-----