**AYUSSH GUPTA**

**21SCSE2030034**

**MCA**

**SECTION-1**

# Bus Management System

## Abstract:

The focus of the project is to computerize traveling company to manage data, so that all the transactions become fast and there should not be any error in transaction like calculation mistake, bill generation and other things. In the existing system,paper was used to save the details but in mine It has basically 3 modules which are to the availability of seats,reservation and cancellation of tickets.

In front end I am using pl/sql concepts and in backend I am Oracle Database.

Goal is to replace the manual paper work and to provide easy interaction with our system.

## Introduction:

The focus of the project is to computerize traveling company to manage data, so that all the transactions become fast and there should not be any error in transaction like calculation mistake, bill generation and other things. It replaces all the paper work. It keeps records of all bills also, giving to ensure 100% successful implementation of the computerized Bus reservation system. This system has three modules:-

- First module helps the customer to enquire the availability of seats in a particular bus at particular date.
- Second module helps him to reserve a ticket.
- Using third module he can cancel a reserved ticket.

First module retrieves data from tables required for enquire. Second module inserts values into the tables on reservation. Third module deletes values into from the table on cancellation of tickets. As the database is hosted using Oracle Server onto internet, the application can access data from any part of the world, by many number of people concurrently.

## PROBLEM SPECIFICATION:

Bus Reservation Systems that were suggested till now, are not up to the desired level. There is no single system which automates all the process. In order to build the system, all the processes in the business should be studied; System study helps us under the problem and needs of the application. System study aims at establishing requests for the system to be acquired, development and installed. It involves studying and analyzing the ways of an organization currently processing the data to produce information. Analyzing the problem thoroughly forms the vital part of the system study. In system analysis, prevailing situation of problem is carefully examined by breaking them into sub problems. Problematic areas are identified and information is collected. Data gathering is essential to any analysis of requests. It is necessary that this analysis familiarizes the designer with objectives, activities and the function of the organization in which the system is to be implemented.

## Problem of Existing system:-

✓Existing system is totally on book and thus a great amount of manual work has to be done. The amount of manual work increases exponentially with increase in services.

✓Needs a lot of working staff and extra attention on all the records.

✓In existing system, there are various problems like keeping records of items, seats available, prices of per/seat and fixing bill generation on each bill.

✓Finding out details regarding any information is very difficult, as the user has to go through all the books manually.

✓Major problem was lack of security.

## Advantages of Proposed system:-

The system is very simple in design and to implement. The system requires very low system resources and the system will work in almost all configurations. It has got following features:

✓Ensure data accuracy.

✓Records are efficiently maintained by DBMS.

✓DBMS also provides security for the information.

✓Any person across the world, having internet can access this service.

✓Availability of seats can be enquired very easily.

✓Passengers can also cancel their tickets easily.

✓ Better Service and minimum time needed for the various processing

✓This would help the corporation prepare and organize its schedules more efficiently on the basis of traffic demand.

## OBJECTIVE:

• To change the manual transaction and provide an electronic system that will help both the management and passenger to process the Reservation effectively and efficiently.

• To record the passengers information that will serves as bases to avoid overcrowding of files.

• To find and get the information needed easily in case of confirmation and for records.

## SOFTWARE REQUIREMENT SPECIFICATION

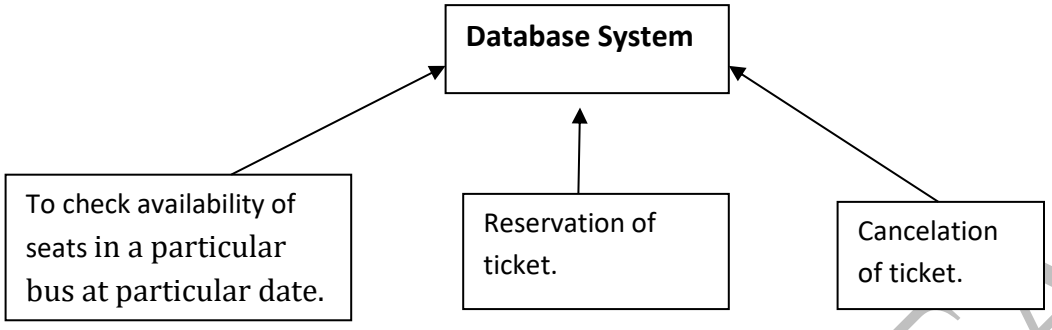
### Hardware Requirements:

- PC with i3 to latest processor.
- 512 MB RAM or above.
- 40 GB Hard Disk or above.

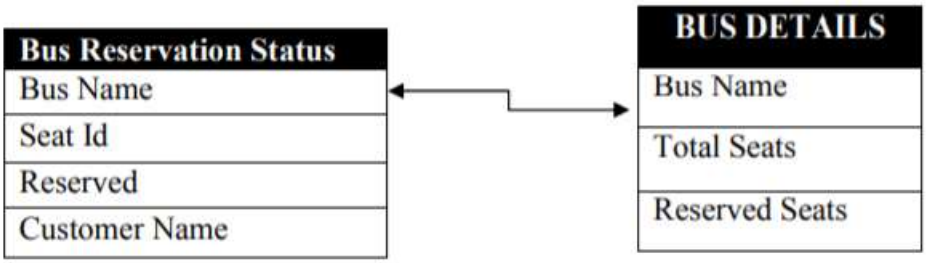
### Software Requirements:

- Operating system : Windows XP (or latest).
- Front end : Java Runtime and PL/SQL
- Platform : SQL Plus(Oracle 11g Edition)
- Back end : Oracle 11g

## System architecture:




## Database design:




## Database Structure:

**Reservation Status:**

| Field Name | Data Type |
|---|---|
| Bus_name | Char(15) |
| Seat_id | Number(3) |
| Reserved | Char(2) |
| Customer_name | Char(15) |

**Bus Details:**

| Field Name | Data Type |
|---|---|
| Bus_name | Char(15) |
| Total_seats | Number(3) |
| Reserved_seats | Number(3) |

## Code:

>>>>>>>>>>>>>>>>>>>>CREATE TABLE<<<<<<<<<<<<<<<<<<<<

create table bus_details6(bus_name char(15) primary key,total_seats number(3),reserved_seats number(3));

create table busreservation_status6(bus_name char(15) references bus_details6(bus_name),seat_id number(3),reserved char(2) check (reserved in('y','n')),customer_name char(15));

>>>>>>>>>>>>>>>>>>>>ENTER BUS DETAILS<<<<<<<<<<<<<<<<<<<<

declare

bname varchar2(15); **--bus name**

tot number(3); --**total seats**

resv number(3); **--reserved seats**

cursor cur is select * from bus_details6; -- **using pointer for the reference of the cotext area in the database here we are using it for fetching records**

begin

insert into bus_details6 values('&bus_name',&total_seats,0); **--inserting values**

open cur;

loop

fetch cur into bname,tot,resv;

if cur%found then – **if data found in context area of the database**

for i in 1..tot **--run a loop till the end of the record**

loop

insert into busreservation_status6 values(bname,i,'n',null);

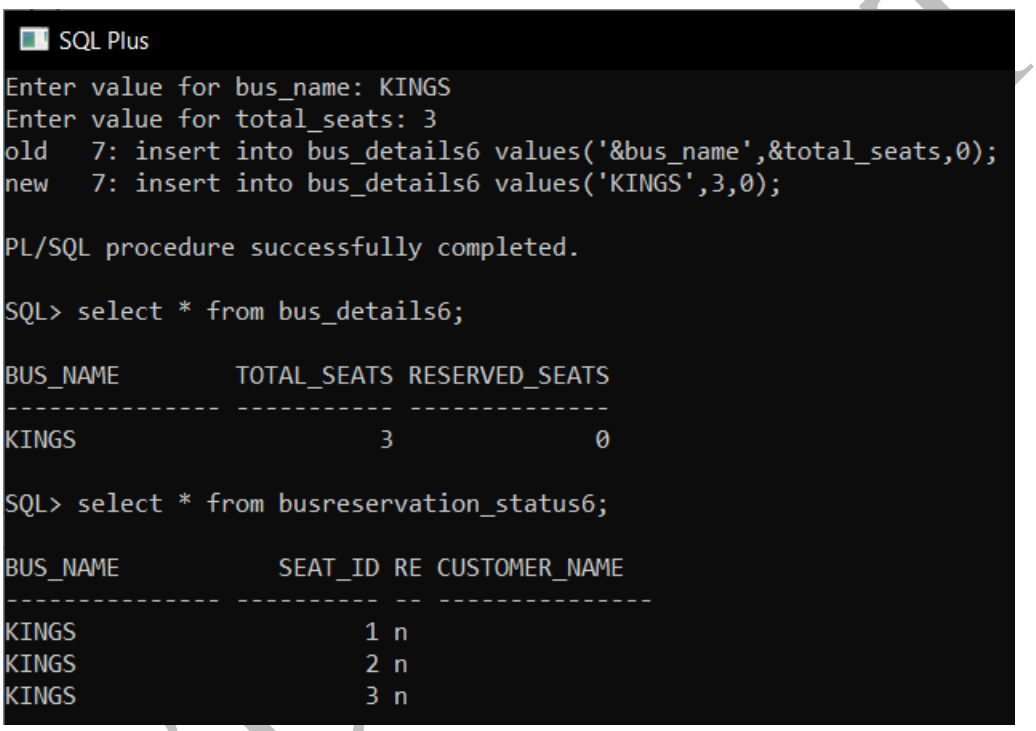
end loop;

else

exit;

```
end if;

end loop;

close cur; --closing cursor

end;

/
```

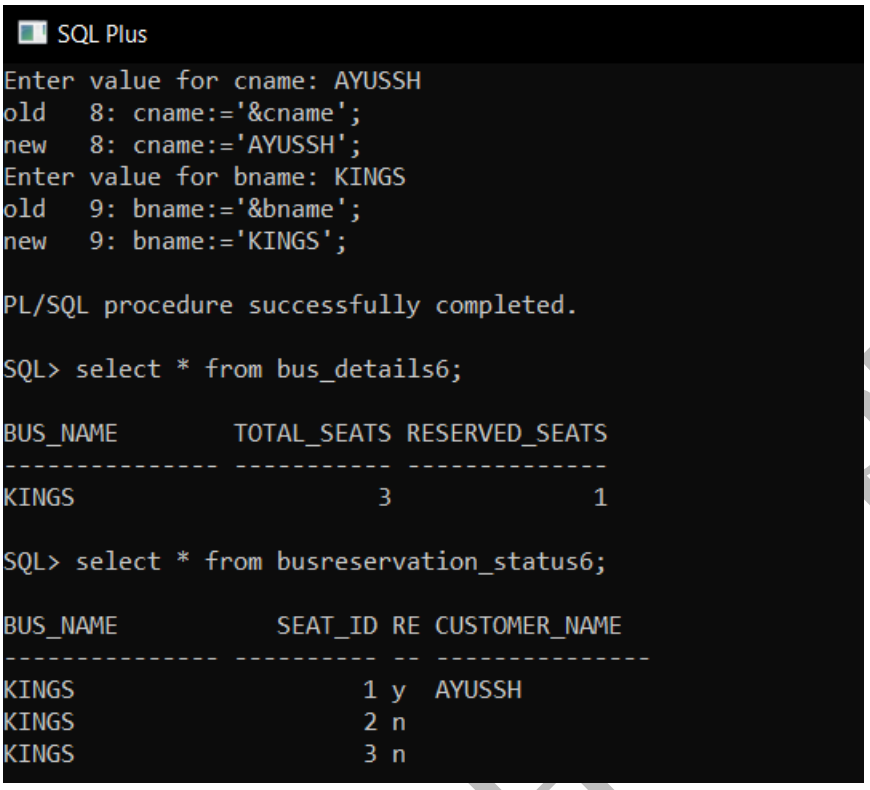
## Output:



>>>>>>>>>>>>>>>>>>>>BUS RESERVATION<<<<<<<<<<<<<<<<<<<<

```
declare
cname char(15);
bname char(15);
sid number(3);
tot number(3);
resv number(3);
begin
cname:='&cname';
bname:='&bname';
select total_seats into tot from bus_details6 where bus_name=bname;
select reserved_seats into resv from bus_details6 where bus_name=bname;
if tot>resv then
 select MIN(seat_id) into sid from busreservation_status6 where bus_name=bname and reserved='n';  --select min means choosing minimum id that is 1
update busreservation_status6 set reserved='y' where bus_name=bname and seat_id=sid;
update busreservation_status6 set customer_name=cname where bus_name=bname and seat_id=sid;  --reserving the seat by name
update bus_details6 set reserved_seats=reserved_seats+1 where bus_name=bname; --upadating the record as one seat is booked now on id no. 1
end if;
dbms_output.put_line('No seat avalable');
end;
/
```

**Output:**




>>>>>>>>>>>>>>>>>>>>BUS CANCELATION<<<<<<<<<<<<<<<<<<<<

declare

cname char(15);

bname char(15);

sid number(3);

resv number(3);

begin

cname:='&cname';

bname:='&bname';

select seat_id into sid from busreservation_status6 where bus_name=bname and customer_name=cname;

select reserved_seats into resv from bus_details6 where bus_name=bname;

if resv<0 then **–checking if there are any reserved seats**

dbms_output.put_line('Cancelation not allow');

else

update busreservation_status6 set reserved='n' where bus_name=bname and seat_id=sid;

update busreservation_status6 set customer_name=null where bus_name=bname and seat_id=sid; **--assigning null value to the customer name and removing the previous value**

update bus_details6 set reserved_seats=reserved_seats-1 where bus_name=bname; **--upadating the record as the reserved seat is cancelled now**

end if;

end;

/

## Output: