A PROJECT REPORT

BASED ON

HOTEL MANAGEMENT SYSTEM USING PYTHON AND MYSQL

ACADEMIC YEAR : 2020-21

BY **HARSHIT MISHRA**

TOPIC **: HOTEL MANAGEMENT SYSTEM**

SOFTWARE : **PYTHON & MySQL**

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PREFACE

The project that I made taught me more about **Python Language** and **MySQL**, about coding, how to make your own GUI and also about structures of management in a system. Thisproject helped me to gain a lot of new knowledge and techniques which is going to help me a lot in future too. In this pandemic situation where we can't take help from our teachersproperly, they still supported us via online help, also my friends and my parents also played a vital role in completion of this wonderful project. I really enjoyed in learning new things about Python and MySQL. Making this much large project within limited time frame also taught me time management. This project about Hotel Management not only taught me about python and MySQL but also taught me about how things are managed in such a big system. This project was fun and extremely knowledgeable to make.

WORKING DESCRIPTION

In my project **'HOTEL MANAGEMENT SYSTEM'** we can book guest rooms,print their bills in PDF format, view Guest Information, show Hotel Images,Food Menu and Hotel Card to our Guest. And due to MySQL database, room numbers can never be same for different guests on same day preventing from Duplicate entry. Also, for security purpose of Guests Information, Admin Login is also added.

1. **Admin Login:** (Main Page) To login into main system we first need to enter correct data of hotel administrator. This data is fixed as enteredin MySQL and cannot be changed without changing Table Entries.
2. **Main Menu:** It has several options for admin to go to any module as per his/her needs.

    I. **Guest Registration:** In this module we can enter our New Guest Data via storing all data in MySQL, also having window to pick date for easy convivence and entry and linking this page with Room Packages.

    II. **Bill Generation:** In this module there are two interlinked pages, first we need to enter guest data and payment method with admin password. If all the information is correct bill will be generated and we can print it in PDF format. Once done Guest data will be deleted from MySQL Table.

    III. **Guest Information:** In this module as following above ones, first enter data of guest and admin password (due to guest privacy we highly suggestto add extra security). If entries are correct guest data will be shown in a new window.

    IV. **Hotel Images:** In this module we will show Hotel Images of Rooms, Lobby, Gaming etc. to our New Guest in a slideshow manner.

    V. **Room Packages:** In this module, we will have information about room and package included with it.

    VI. **In-House Food Menu:** In this our Hotel's Restaurant Menu is shown.

    VII. **Hotel Information:** Hotel Card is shown in new window.

    VIII. **Logout:** Takes us back to Admin Login Page.

HARDWARE AND SOFTWARE

Minimum Hardware Required:

1. **CPU:** Intel Core or Xeon or AMD CPU. (2 GHz recommended)
2. **Cores:** Single/Dual core recommended
3. **RAM**: 4 to 6 GB (1600MHz DDR4) recommended
4. **Graphic Accelerators:** NVidia or ATI with support of OpenGL 1.5 or higher.
5. **Display Resolution:** 1920 X 1080 is recommended

Software Required:

1. **Operating System:** Windows 10 (X64 bit only) or Ubuntu OS Latest Version.
2. **Main Platform:** Python (3.9.0) must with module (mysql-python-connector, tkinter, tkcalendar, PyMySQL)
3. **Database Version:** MySQL (8.0) must.

LIBRARIES USED

1. **Tkinter:** Tkinter is the standard GUI library for Python. Python when combined with Tkinter provides a fast and easy way to create GUI applications. Tkinter provides a powerful object-oriented interface to the Tk GUI toolkit.

2. **PyMySQL or mysql:** MySQLdb is an interface for connecting toa MySQL database server from Python. It implements the Python Database API v2. 0 and is built on top of the MySQL C API.

3. **OS:** The OS module in python provides functions for interacting with the operating system. OS, comes under Python's standard utility modules. This module provides a portable way of using operating system dependent functionality. The *os* and *os.path* modules include many functions to interact with the file system.

4. **Datetime and strftime:** In Python, date and time are not a data type of its own, but a module named datetime can be imported to work with the date as well as time. The **strftime()** function is used to convert date and timeobjects to their string representation. It takes one or more input of formattedcode and returns the string representation.

5. **tkcalendar:** The tkcalendar is a python module that provides the Calendar and Date Entry widgets for Tkinter. Events can be displayed in the Calendar with custom colors and a tooltip displays the event list for a given day.

ABOUT PYTHON AND MYSQL

About Python:

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whitespace. It is an open-source user friendly software which aims for more output in fewer codes. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Python is dynamically typed and garbage-collected. It supports multiple programming paradigms, including procedural, object-oriented, and functional programming. Python is often described as a "batteries included" language due to its comprehensive standard library.

Python interpreters are available for many operating systems. A global community of programmers develops and maintains CPython, an open source reference implementation. A non-profit organization, the Python Software Foundation, manages and directs resources for Python and CPython development.

Python used while making this project is version **3.9.0**

About MySQL:

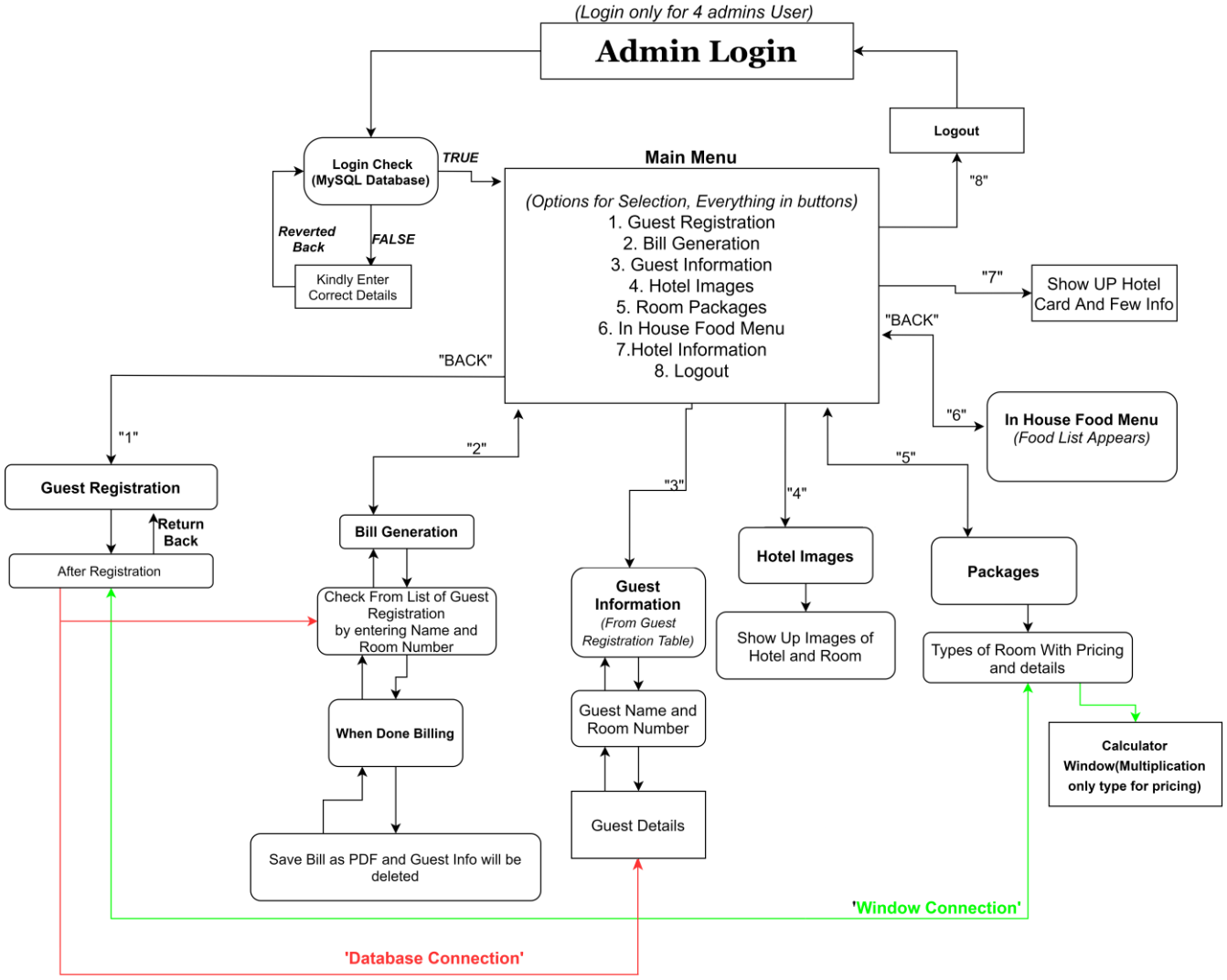
MySQL is an open-source relational database management system (RDBMS). Itis free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL was created by a Swedish company, MySQL AB, founded by David Axmark, Allan Larsson and Michael "Monty" Widenius. Original development of MySQL by Widenius and Axmark began in 1994.

MySQL has stand-alone clients that allow users to interact directly with a MySQL database using SQL, but more often MySQL is used with other programs to implement applications that need relational database capability.

MySQL is written in C and C++. Its SQL parser is written in yacc, but it uses a home-brewed lexical analyzer.

MySQL used while making this project is version **8.0**

FLOW CHART


(Login only for 4 admins User)
Admin Login
Logout
Login Check (MySQL Database)
TRUE
FALSE
Reverted Back
Kindly Enter Correct Details
Main Menu
(Options for Selection, Everything in buttons)
1. Guest Registration
2. Bill Generation
3. Guest Information
4. Hotel Images
5. Room Packages
6. In House Food Menu
7.Hotel Information
8. Logout
"8"
"7"
Show UP Hotel Card And Few Info
"BACK"
"BACK"
"1"
"2"
"3"
"4"
"5"
"6"
In House Food Menu
(Food List Appears)
Guest Registration
Return Back
After Registration
Bill Generation
Check From List of Guest Registration by entering Name and Room Number
When Done Billing
Save Bill as PDF and Guest Info will be deleted
Guest Information
(From Guest Registration Table)
Guest Name and Room Number
Guest Details
Hotel Images
Show Up Images of Hotel and Room
Packages
Types of Room With Pricing and details
Calculator Window(Multiplication only type for pricing)
'Window Connection'
'Database Connection'

SQL TABLES

ADMIN LOGIN TABLE:

```
mysql> use hoteladmin;
Database changed
mysql> show tables;
+----------------------+
| Tables_in_hoteladmin |
+----------------------+
| admin_detail         |
+----------------------+
1 row in set (0.03 sec)

mysql> select * from admin_detail;
+---------+--------+
| a_id    | a_pass |
+---------+--------+
| ADMIN10 | ADM100 |
| ADMIN20 | ADM200 |
| ADMIN30 | ADM300 |
| ADMIN40 | ADM400 |
+---------+--------+
4 rows in set (0.01 sec)
```

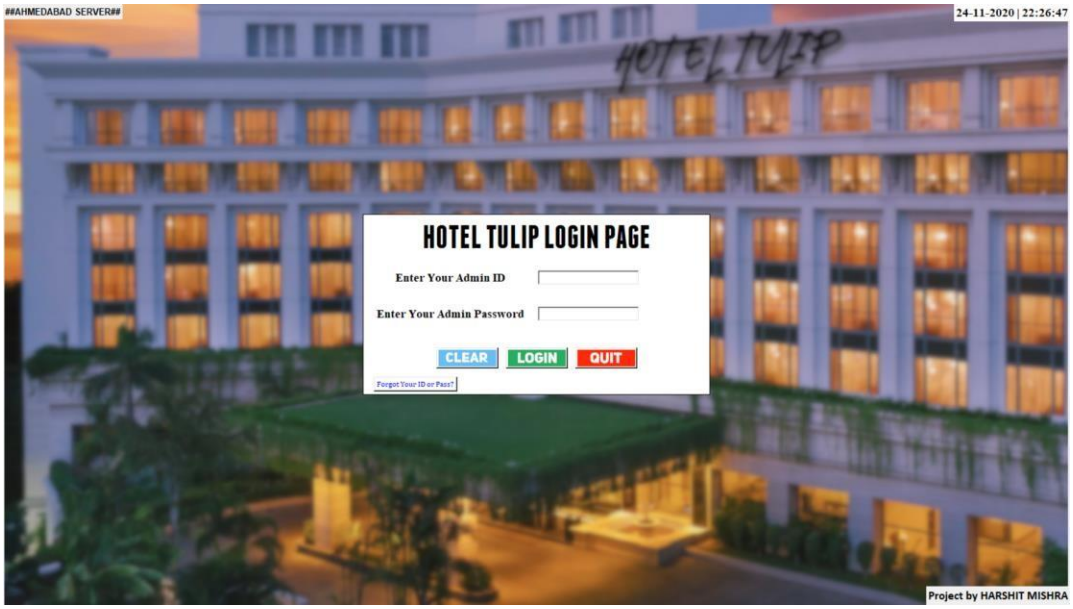
GUEST DATA ENTRY TABLE:

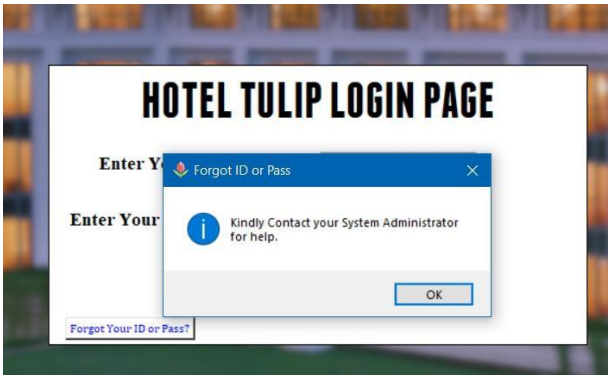
```
mysql> use guestreg;
Database changed
mysql> select * from guestinfo;
+---------------+------+--------+-------------+----------+----------------------+------+---------+-----------+------------+
| name          | age  | gender | phone       | idproof  | address              | city | country | checkin   | checkout   |
+---------------+------+--------+-------------+----------+----------------------+------+---------+-----------+------------+
| Suman Jain    |   34 | Female | 4757253535  | Aadhar   | 090- J Bunglows      | AGRA | IND     | 16/12/2020 | 18/12/2020 |
| Riya Sharma   |   28 | Female | 2572550520  | PC       | E-202, GJ - HouseRows | CAL  | IND     | 26/11/2020 | 30/11/2020 |
| Peter Welbeck |   35 | Male   | 284946193262 | Passport | OR-BJ, 90 SQ Roads   | NYC  | USA     | 23/11/2020 | 26/11/2020 |
| Jayesh Raj    |   40 | Male   | 528891201820 | DL       | O-101, KQ Builds     | GOA  | IND     | 25/11/2020 | 27/11/2020 |
+---------------+------+--------+-------------+----------+----------------------+------+---------+-----------+------------+
4 rows in set (0.01 sec)
```

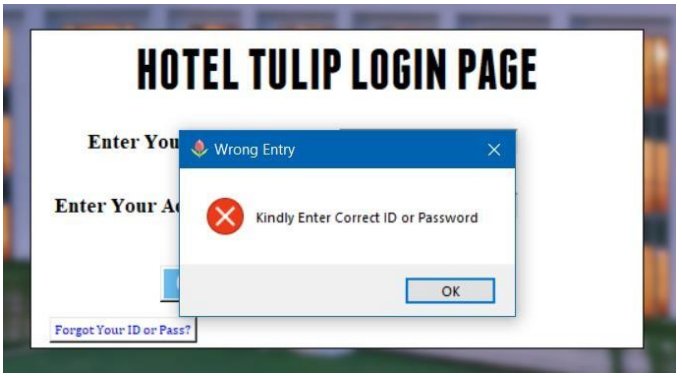
```
+--------+--------------------+--------------+-------------+----------------+------+-------+--------+
| roomno | roomtype           | totalmembers | memname     | before_stayed  | nday | roomp | totalp |
+--------+--------------------+--------------+-------------+----------------+------+-------+--------+
| 101    | King Size Room     | 1            | Self        | No             |    2 | 20000 |  52500 |
| 122    | Delux Room         | 2            | Riya, Kiran | Yes            |    4 | 30000 | 132500 |
| 136    | Presidential Suite | 1            | Self        | No             |    3 | 70000 | 222500 |
| 138    | Presidential Suite | 1            | Self        | No             |    2 | 70000 | 152500 |
+--------+--------------------+--------------+-------------+----------------+------+-------+--------+
```

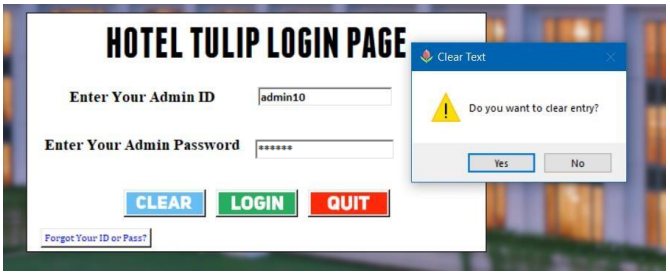
OUTPUT

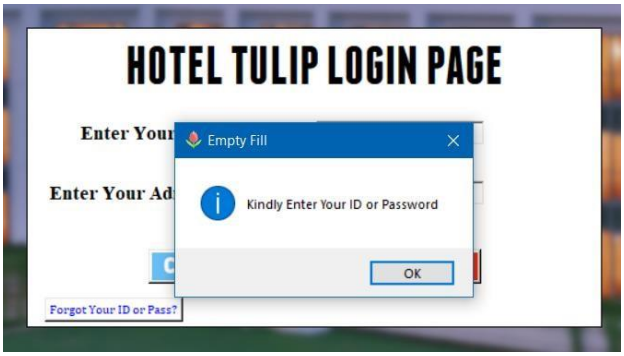
ADMIN LOGIN:

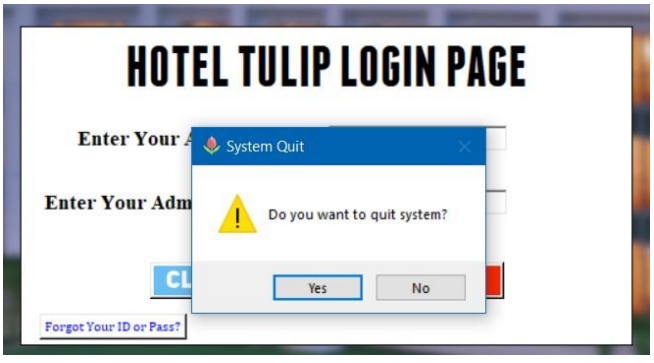




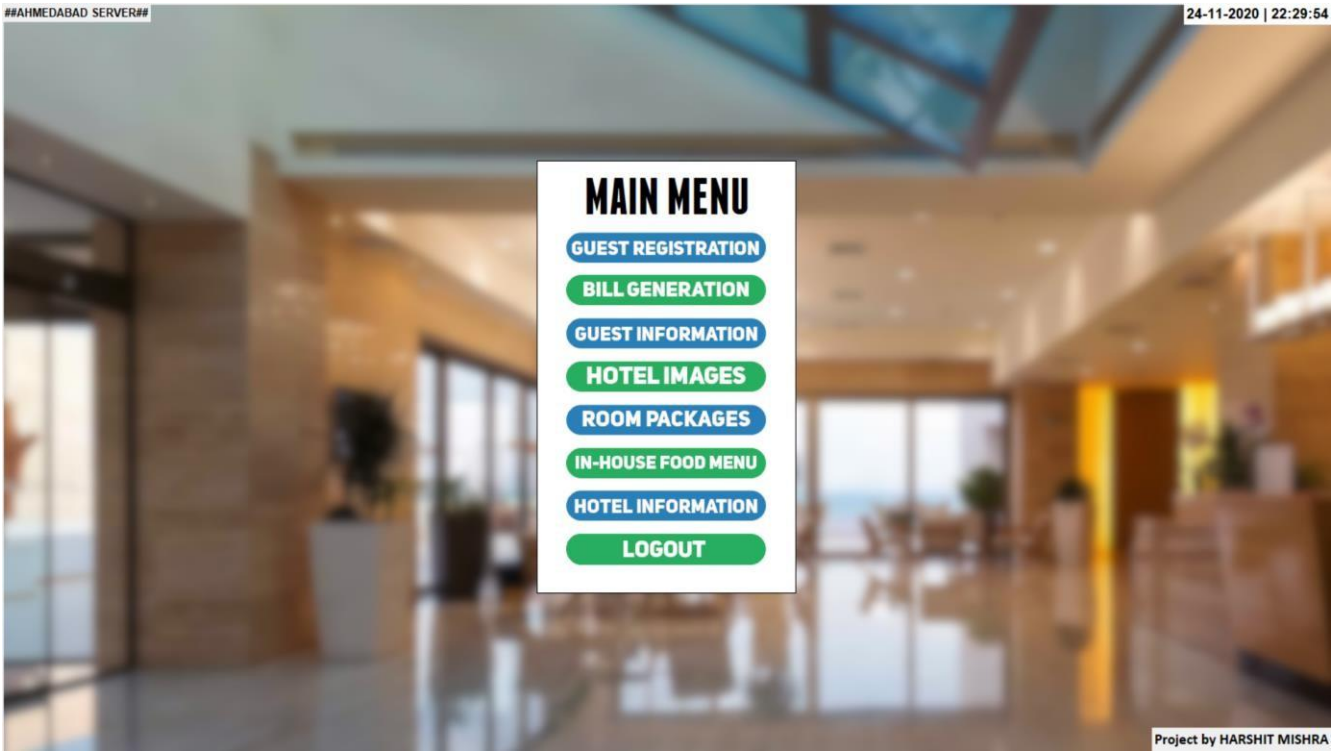




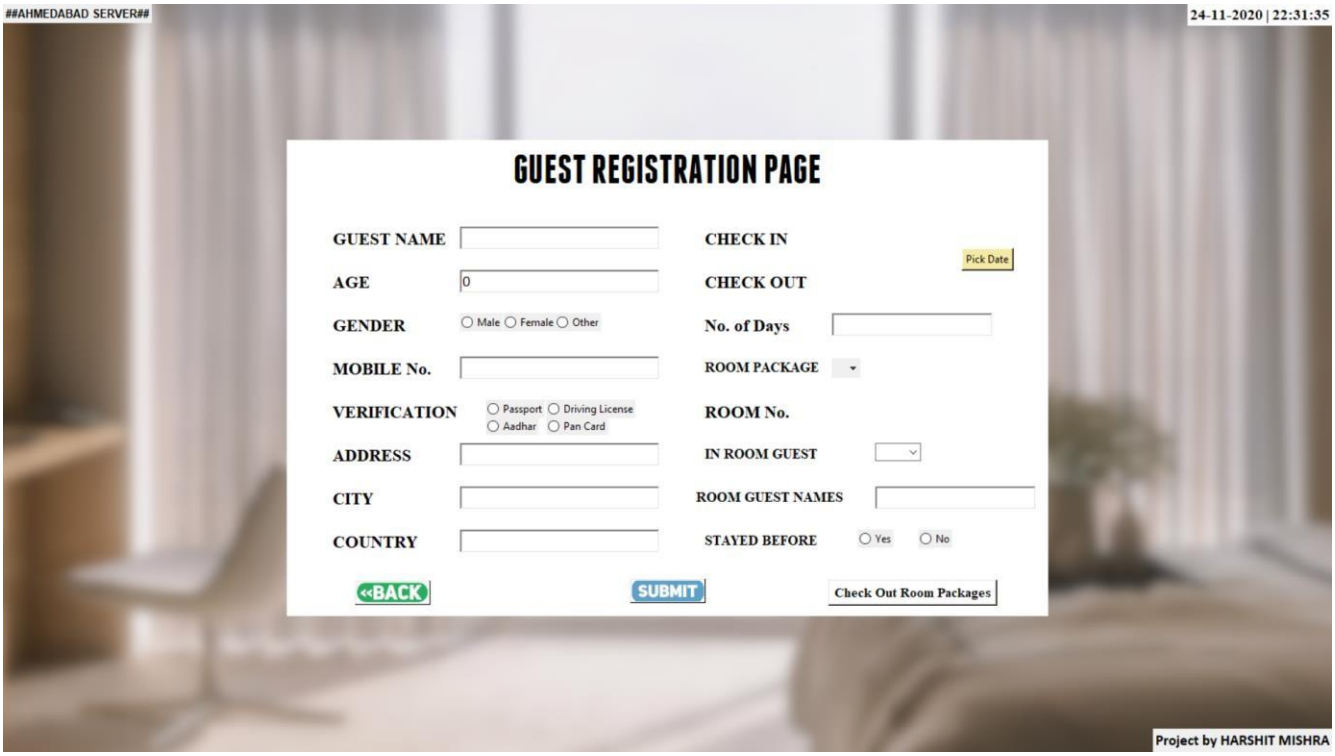


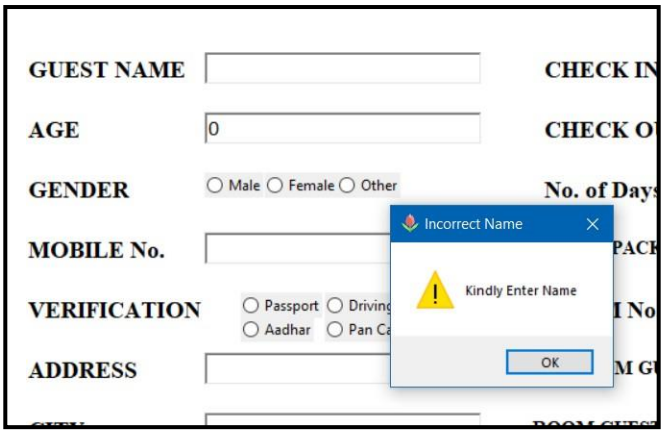


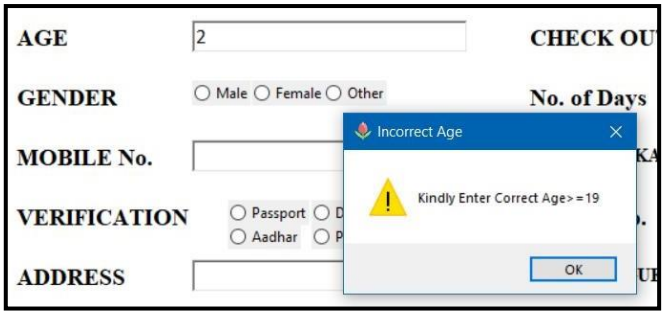
MAIN MENU:

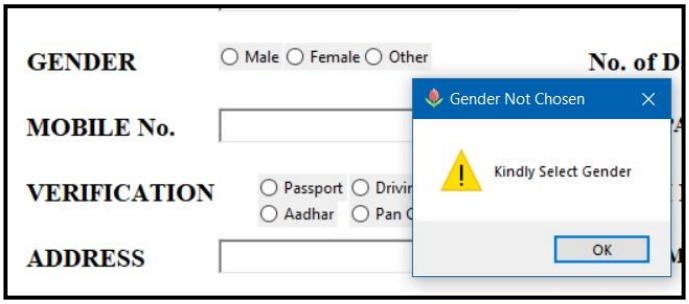


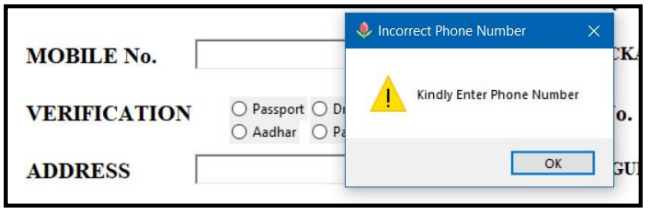
1. GUEST REGISTRATION:



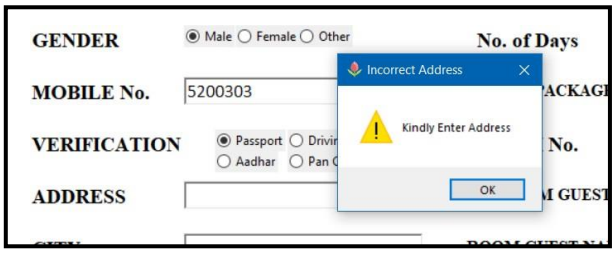

GUEST NAME
AGE
0
GENDER
Male Female Other
MOBILE No.
VERIFICATION
Passport
Aadhar
ADDRESS
CHECK IN
CHECK O
No. of Days
Incorrect Name
Kindly Enter Name
OK

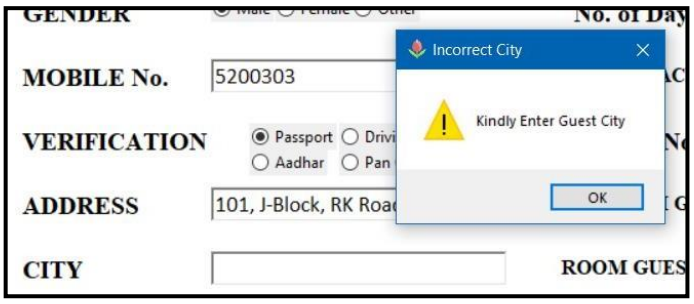

AGE
2
GENDER
Male Female Other
MOBILE No.
VERIFICATION
Passport
Aadhar
ADDRESS
CHECK OU
No. of Days
Incorrect Age
Kindly Enter Correct Age>=19
OK

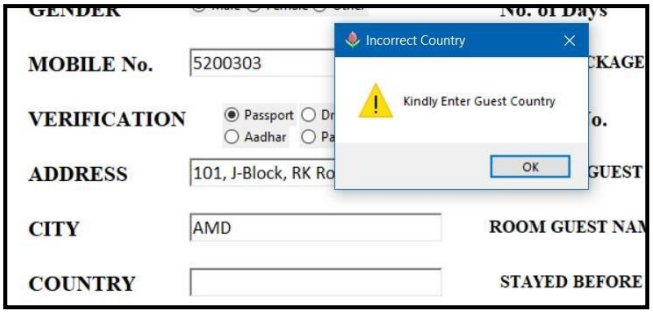

GENDER
Male Female Other
MOBILE No.
VERIFICATION
Passport
Aadhar
ADDRESS
No. of D
Gender Not Chosen
Kindly Select Gender
OK

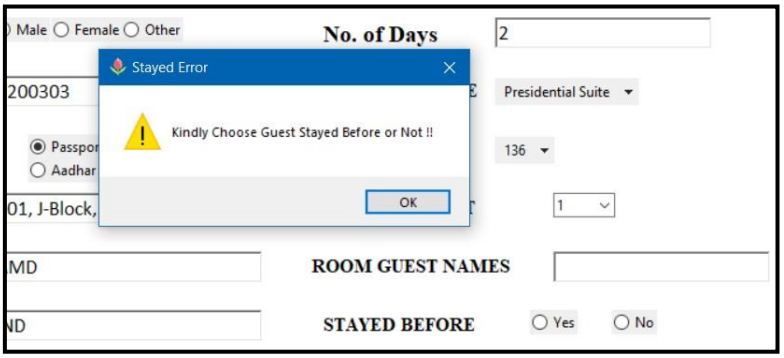

MOBILE No.
VERIFICATION
Passport
Aadhar
ADDRESS
Incorrect Phone Number
Kindly Enter Phone Number
OK

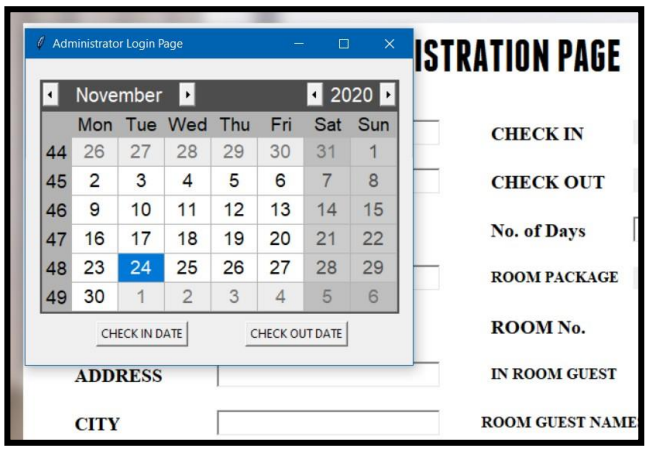

GENDER
Male Female Other
MOBILE No.
5200303
VERIFICATION
Passport
Aadhar
ADDRESS
No. of Days
Verification Method
Kindly Choose Verification Method Used
OK

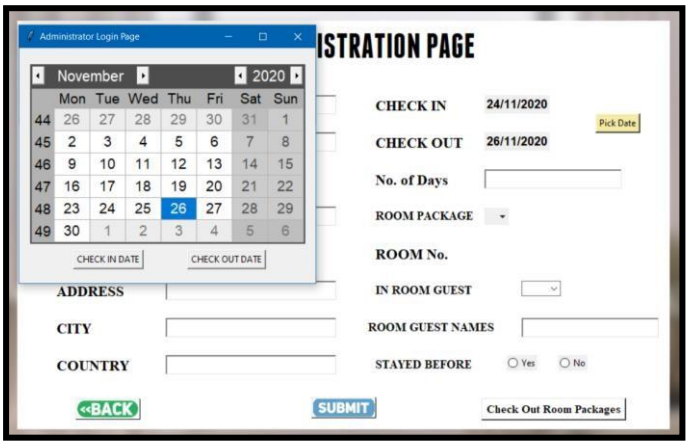

GENDER
Male Female Other
MOBILE No.
5200303
VERIFICATION
Passport
Aadhar
ADDRESS
No. of Days
Incorrect Address
Kindly Enter Address
OK

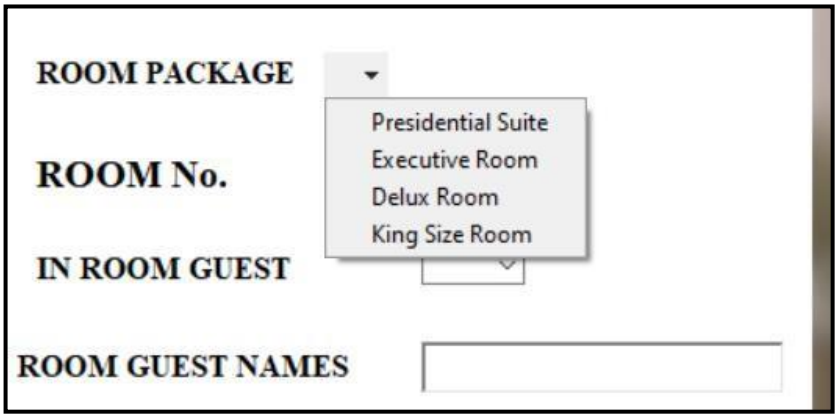

MOBILE No.
5200303
VERIFICATION
Passport
Aadhar
Pan
ADDRESS
101, J-Block, RK Road
CITY
ROOM GUES
Incorrect City
Kindly Enter Guest City
OK

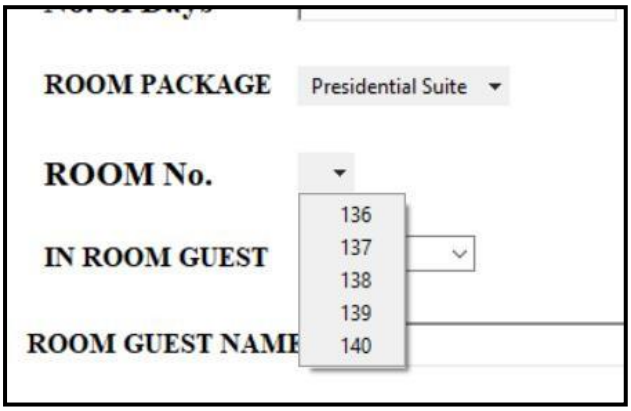

MOBILE No.
5200303
VERIFICATION
Passport
Aadhar
ADDRESS
101, J-Block, RK Ro
CITY
AMD
COUNTRY
ROOM GUEST NA
STAYED BEFORE
Incorrect Country
Kindly Enter Guest Country
OK

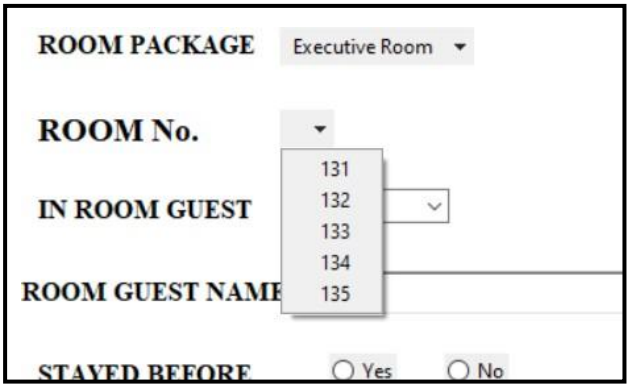

Male Female Other
No. of Days
2
200303
Presidential Suite
Passpor
Aadhar
136
01, J-Block,
1
MD
ROOM GUEST NAMES
ND
STAYED BEFORE
Yes
No
Stayed Error
Kindly Choose Guest Stayed Before or Not !!
OK

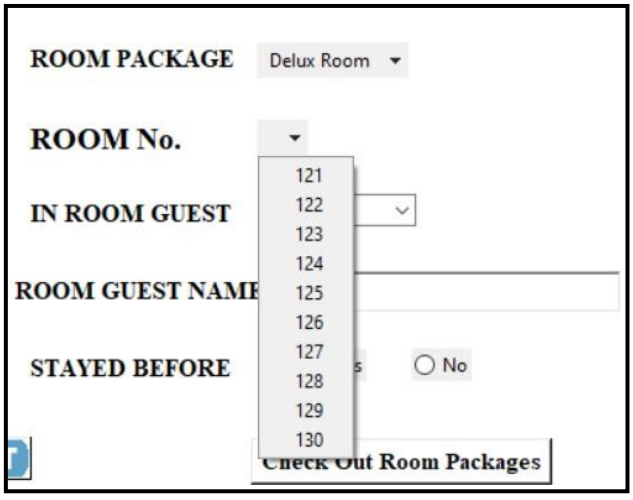

Administrator Login Page
November
2020
Mon Tue Wed Thu Fri Sat Sun
CHECK IN DATE
CHECK OUT DATE
ISTRATION PAGE
CHECK IN
CHECK OUT
No. of Days
ROOM PACKAGE
ROOM No.
IN ROOM GUEST
ADDRESS
CITY
ROOM GUEST NAME

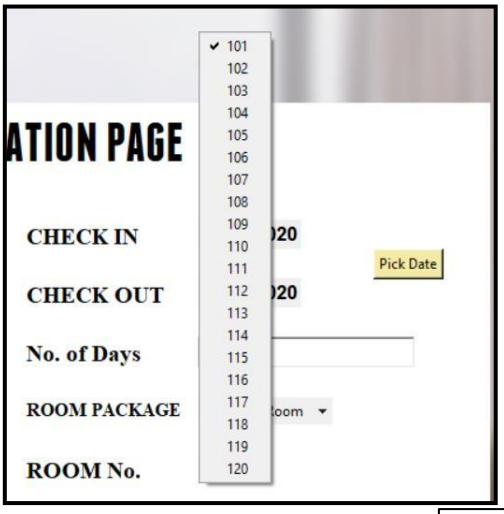

Administrator Login Page
November
2020
CHECK IN DATE
CHECK OUT DATE
ISTRATION PAGE
CHECK IN
24/11/2020
Pick Date
CHECK OUT
26/11/2020
No. of Days
ROOM PACKAGE
ROOM No.
IN ROOM GUEST
ADDRESS
CITY
ROOM GUEST NAMES
COUNTRY
STAYED BEFORE
Yes
No
«BACK
SUBMIT
Check Out Room Packages

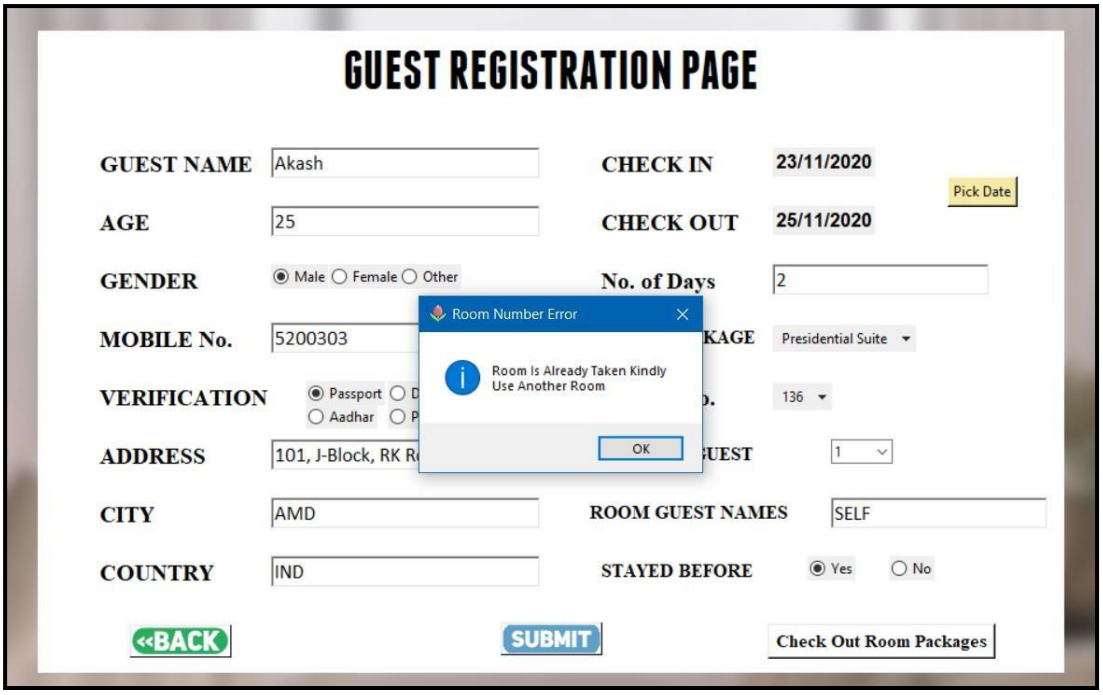

ROOM PACKAGE
Presidential Suite
Executive Room
Delux Room
King Size Room
ROOM No.
IN ROOM GUEST
ROOM GUEST NAMES

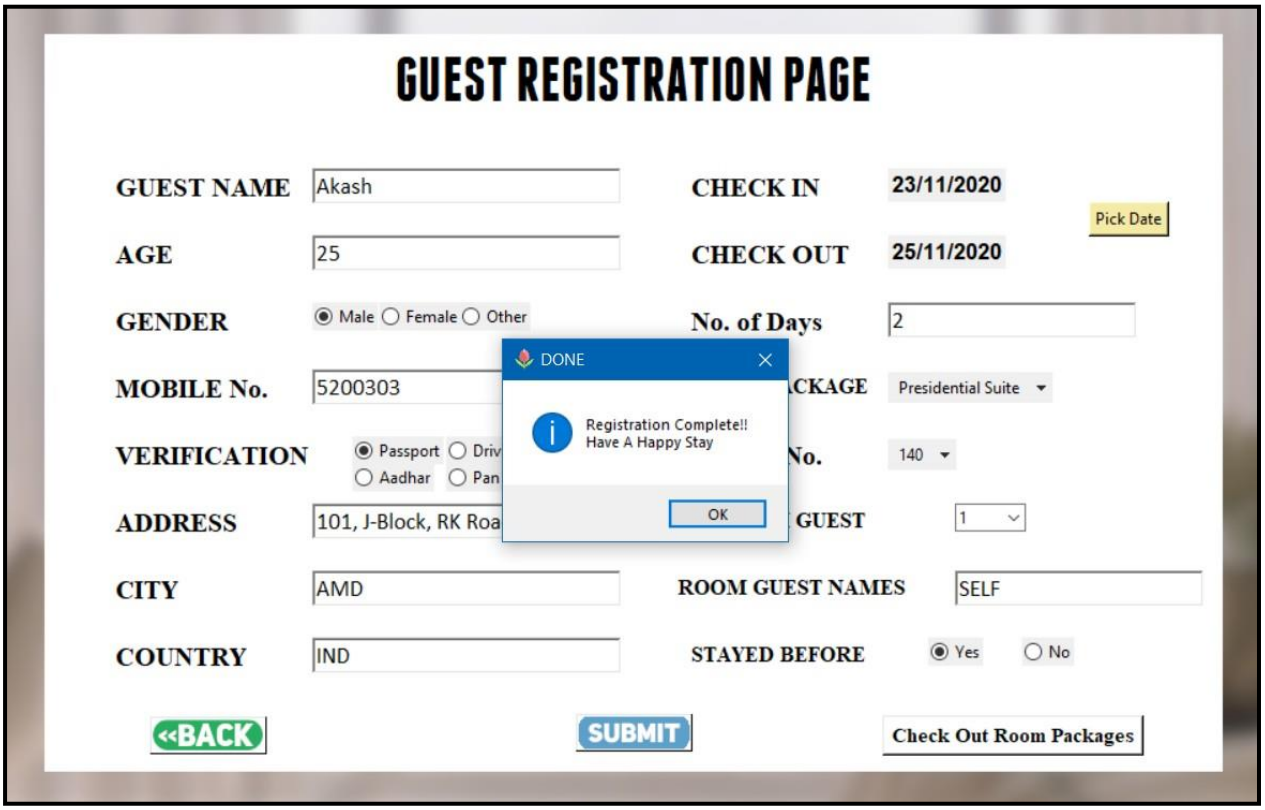

ROOM PACKAGE
Presidential Suite
ROOM No.
IN ROOM GUEST
ROOM GUEST NAME
136
137
138
139
140


ROOM PACKAGE
Executive Room
ROOM No.
IN ROOM GUEST
ROOM GUEST NAME
131
132
133
134
135
STAYED BEFORE
Yes
No

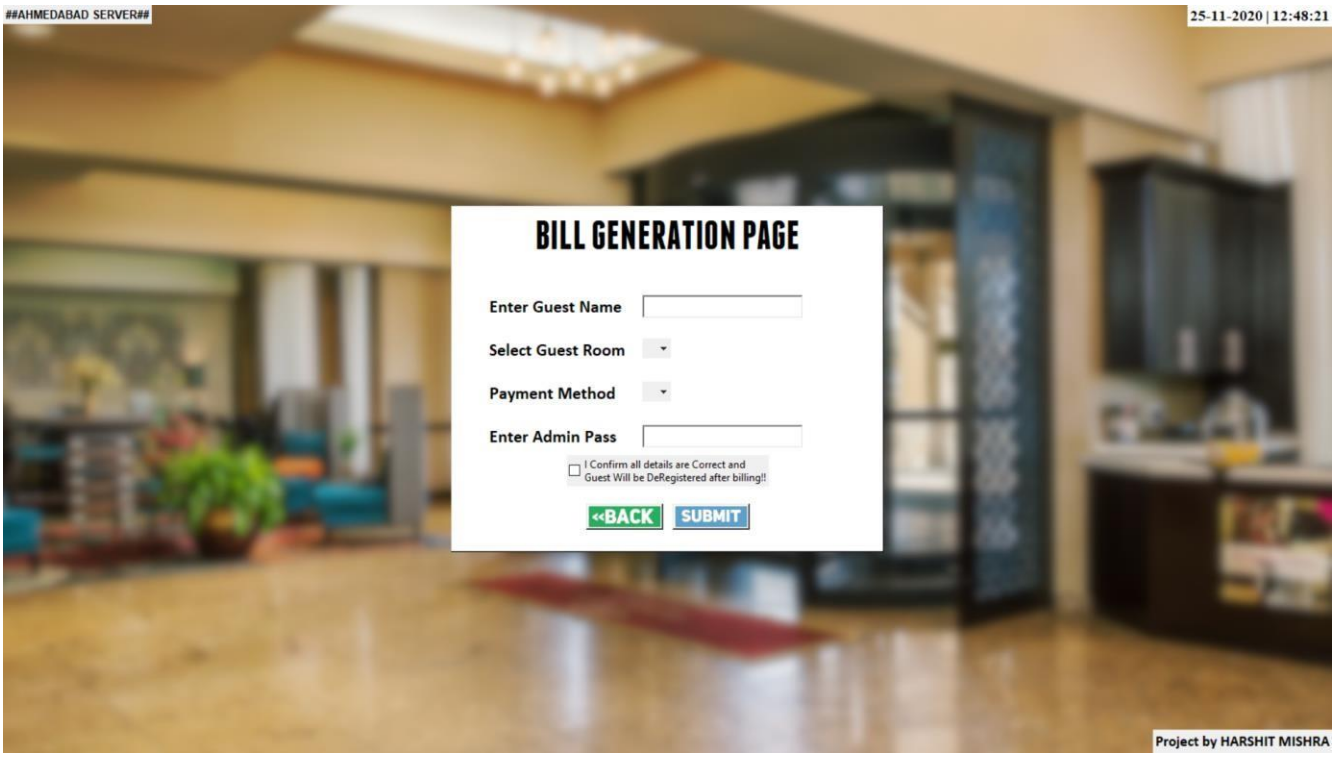

ROOM PACKAGE
Delux Room
ROOM No.
IN ROOM GUEST
ROOM GUEST NAME
STAYED BEFORE
No
121
122
123
124
125
126
127
128
129
130
Check Out Room Packages

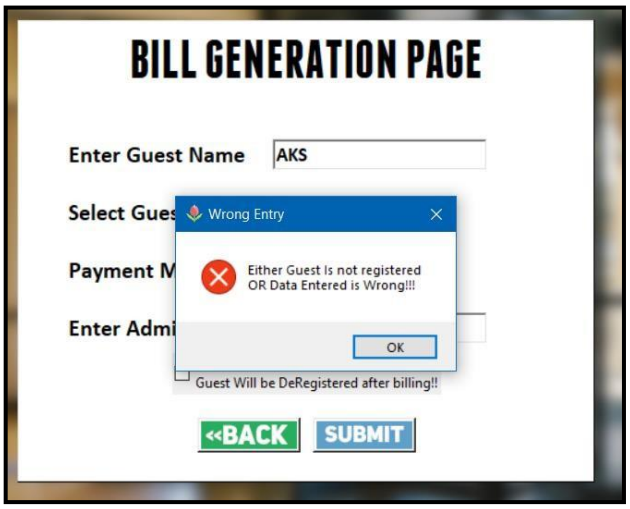

ATION PAGE
CHECK IN
Pick Date
CHECK OUT
No. of Days
ROOM PACKAGE
ROOM No.
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120

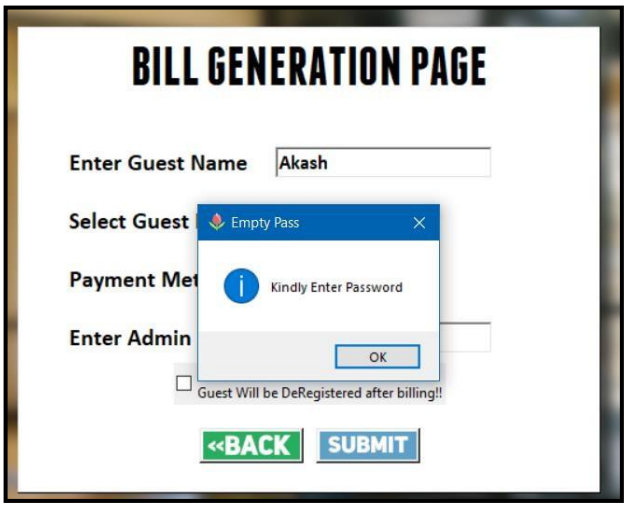

GUEST REGISTRATION PAGE
GUEST NAME
Akash
CHECK IN
23/11/2020
Pick Date
AGE
25
CHECK OUT
25/11/2020
GENDER
Male
Female
Other
No. of Days
2
MOBILE No.
5200303
Presidential Suite
VERIFICATION
Passport
Aadhar
136
ADDRESS
101, J-Block, RK R
1
CITY
AMD
ROOM GUEST NAMES
SELF
COUNTRY
IND
STAYED BEFORE
Yes
No
«BACK
SUBMIT
Check Out Room Packages
Room Number Error
Room Is Already Taken Kindly
Use Another Room
OK

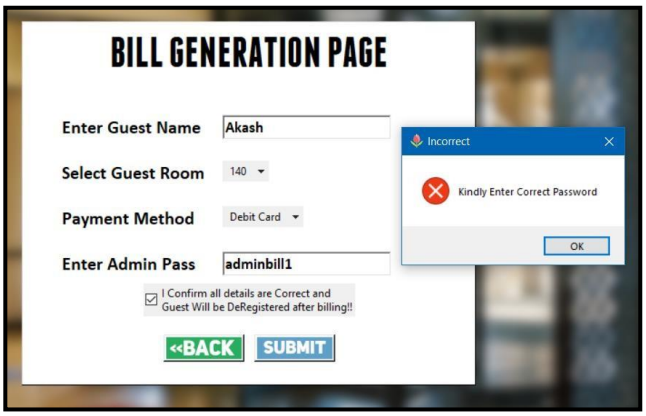

GUEST REGISTRATION PAGE
GUEST NAME
Akash
CHECK IN
23/11/2020
Pick Date
AGE
25
CHECK OUT
25/11/2020
GENDER
Male
Female
Other
No. of Days
2
MOBILE No.
5200303
Presidential Suite
VERIFICATION
Passport
Aadhar
140
ADDRESS
101, J-Block, RK Roa
1
CITY
AMD
ROOM GUEST NAMES
SELF
COUNTRY
IND
STAYED BEFORE
Yes
No
«BACK
SUBMIT
Check Out Room Packages
DONE
Registration Complete!!
Have A Happy Stay
OK

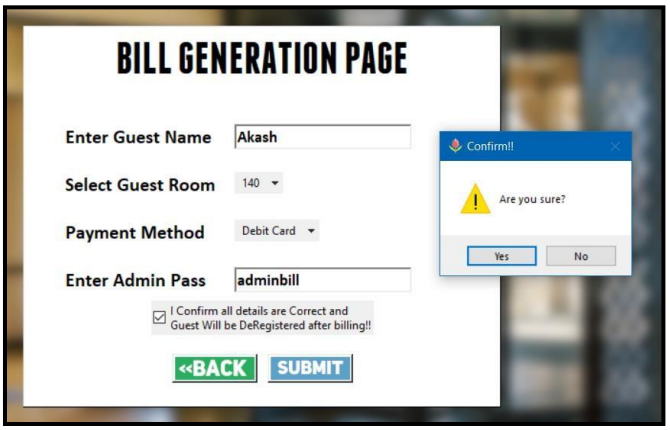
2. GUEST REGISTRATION:

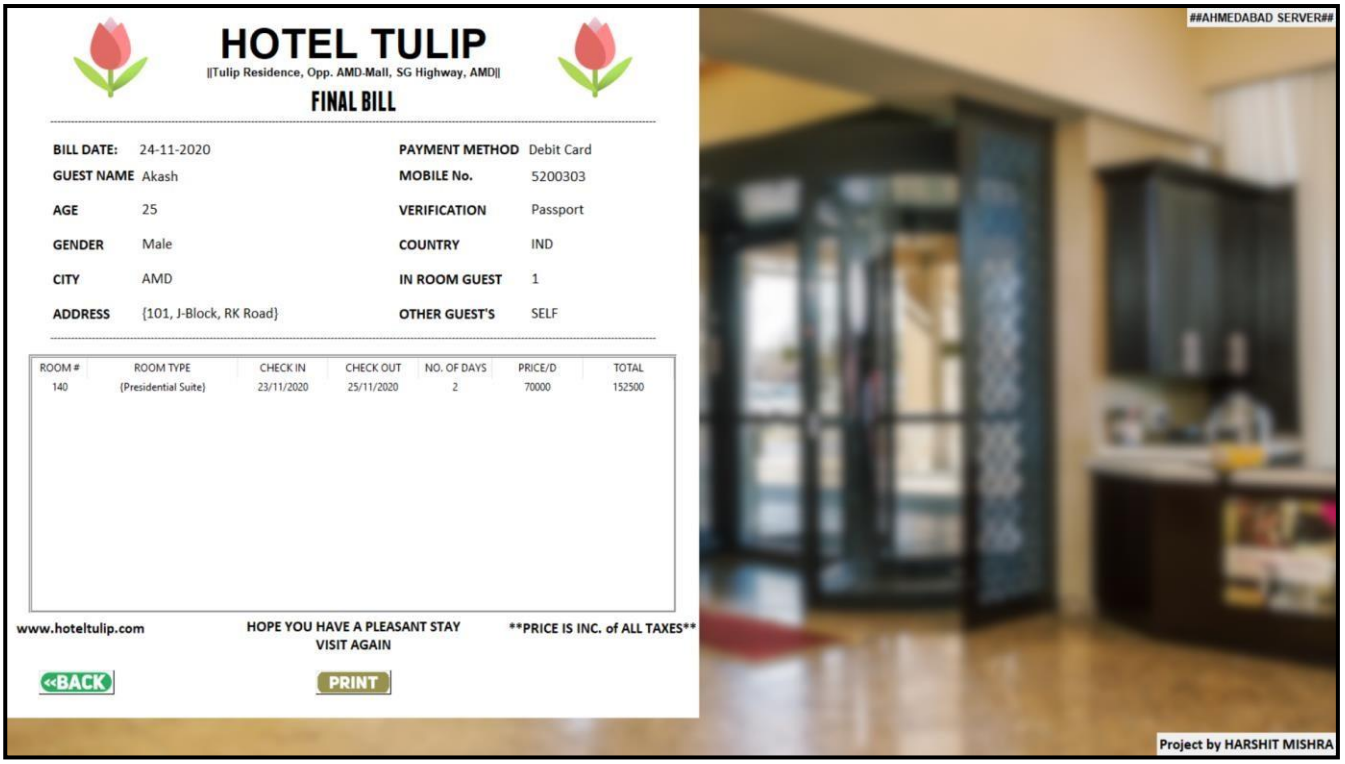


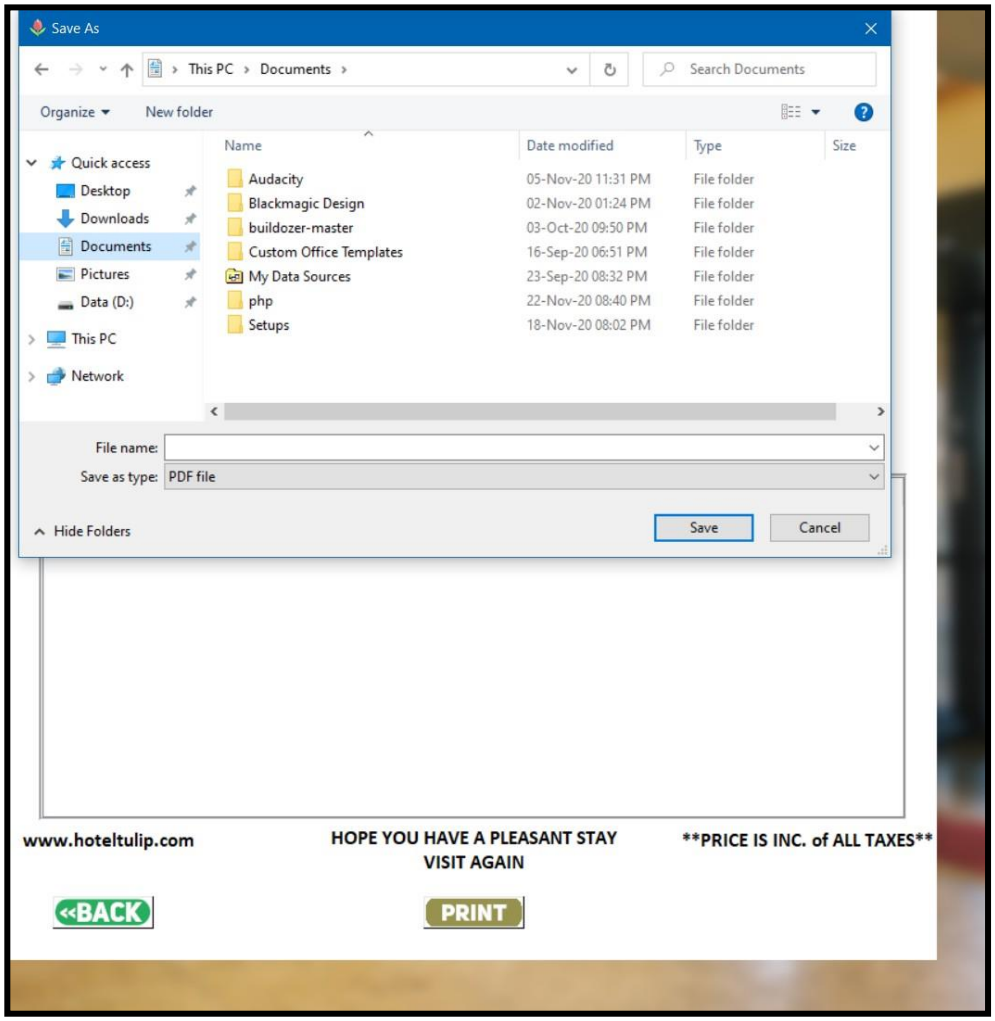









HOTEL TULIP
||Tulip Residence, Opp. AMD-Mall, SG Highway, AMD||
FINAL BILL
BILL DATE: 24-11-2020
PAYMENT METHOD Debit Card
GUEST NAME Akash
MOBILE No. 5200303
AGE 25
VERIFICATION Passport
GENDER Male
COUNTRY IND
CITY AMD
IN ROOM GUEST 1
ADDRESS {101, J-Block, RK Road}
OTHER GUEST'S SELF
ROOM # ROOM TYPE CHECK IN CHECK OUT NO. OF DAYS PRICE/D TOTAL
140 (Presidential Suite) 23/11/2020 25/11/2020 2 70000 152500
www.hoteltulip.com
HOPE YOU HAVE A PLEASANT STAY
VISIT AGAIN
PRICE IS INC. of ALL TAXES
«BACK
PRINT
##AHMEDABAD SERVER##
Project by HARSHIT MISHRA


Save As
This PC › Documents ›
Search Documents
Organize
New folder
Quick access
Desktop
Downloads
Documents
Pictures
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This PC
Network
Name
Date modified
Type
Size
Audacity 05-Nov-20 11:31 PM File folder
Blackmagic Design 02-Nov-20 01:24 PM File folder
buildozer-master 03-Oct-20 09:50 PM File folder
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php 22-Nov-20 08:40 PM File folder
Setups 18-Nov-20 08:02 PM File folder
File name:
Save as type: PDF file
Hide Folders
Save
Cancel
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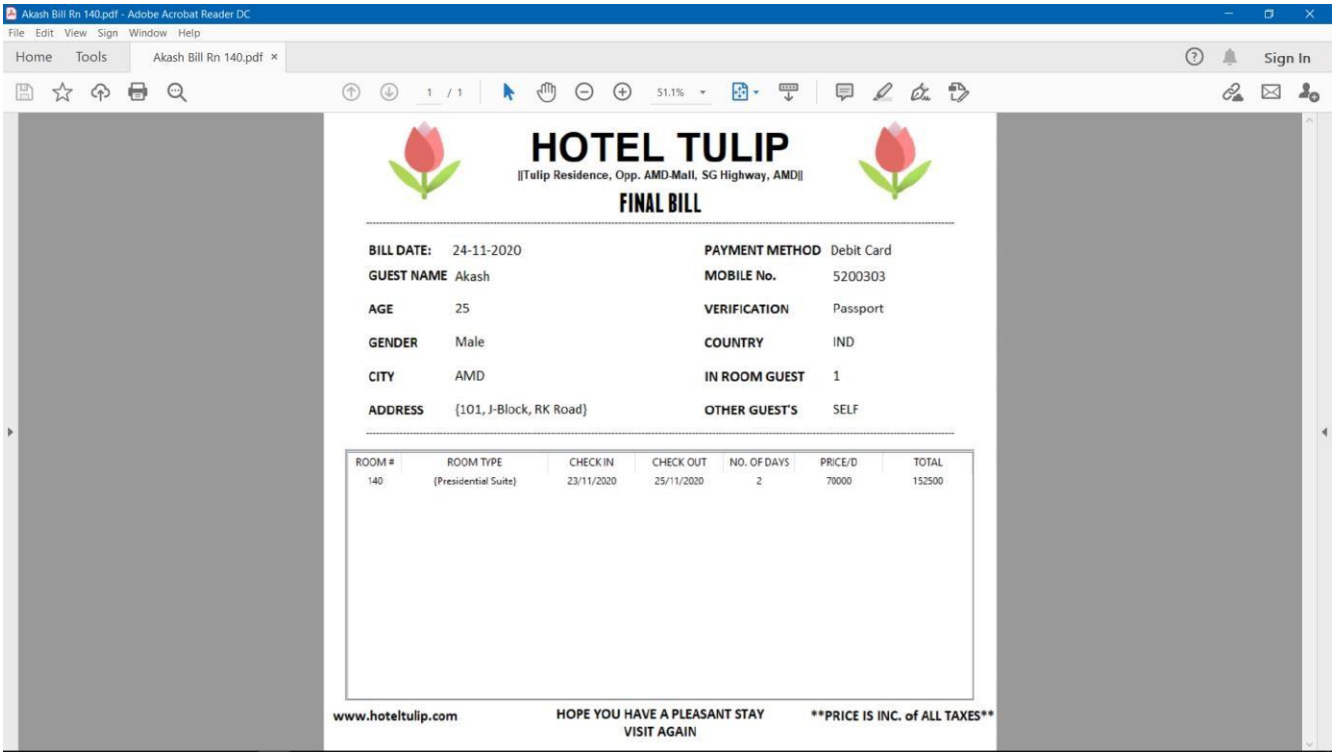
HOPE YOU HAVE A PLEASANT STAY
VISIT AGAIN
PRICE IS INC. of ALL TAXES
«BACK
PRINT

FINAL BILL IN PDF FORMAT:



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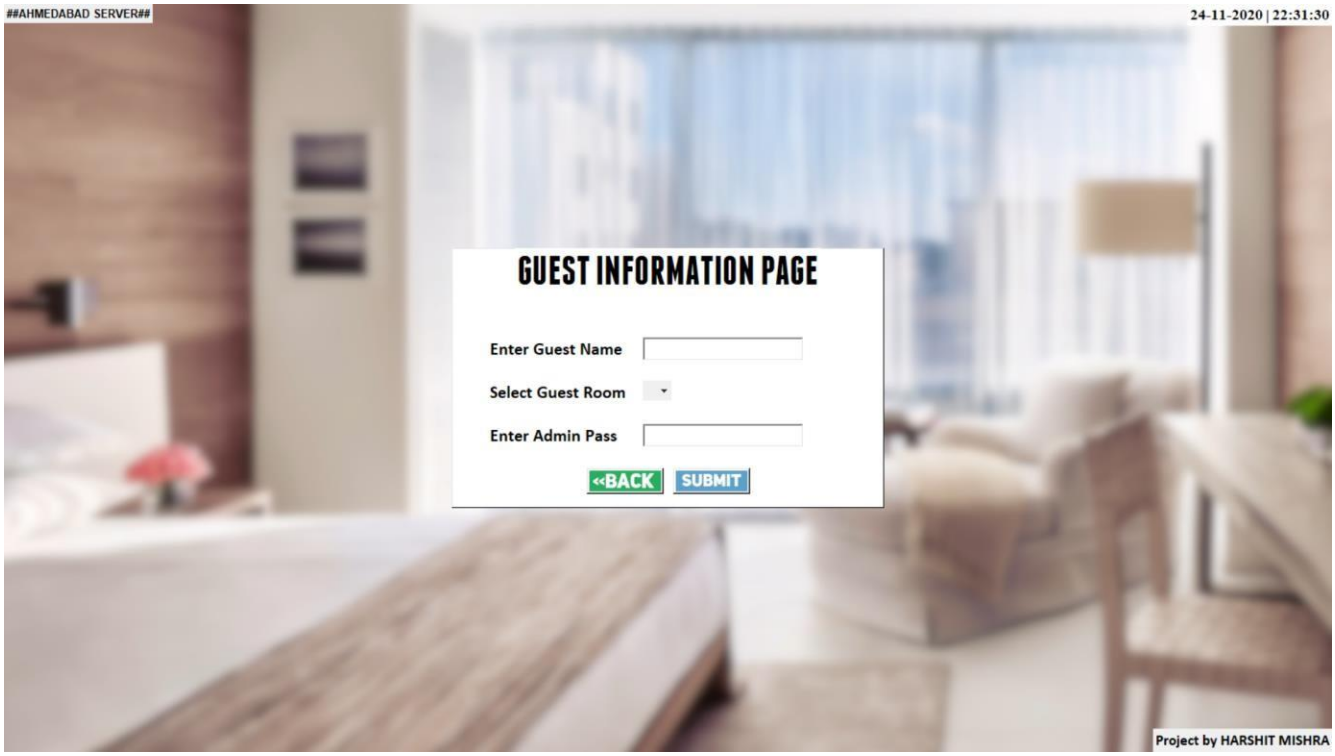

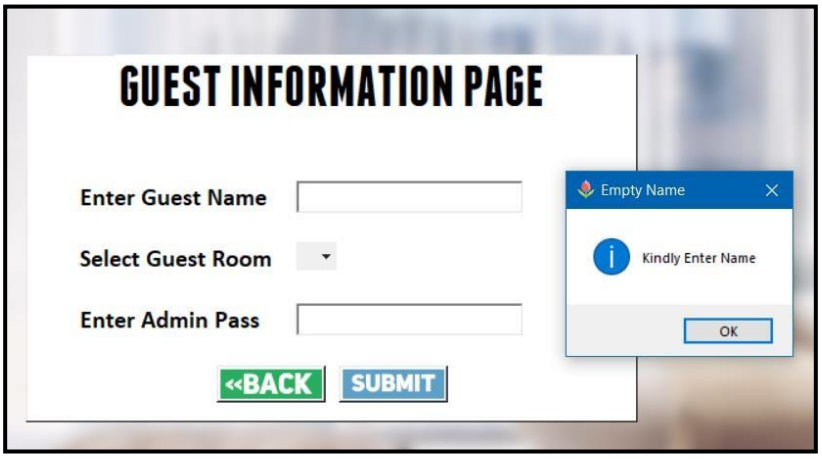

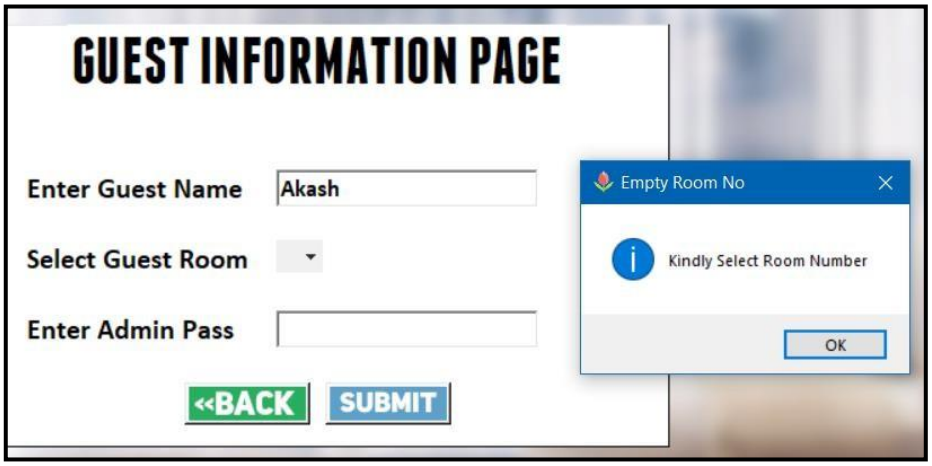

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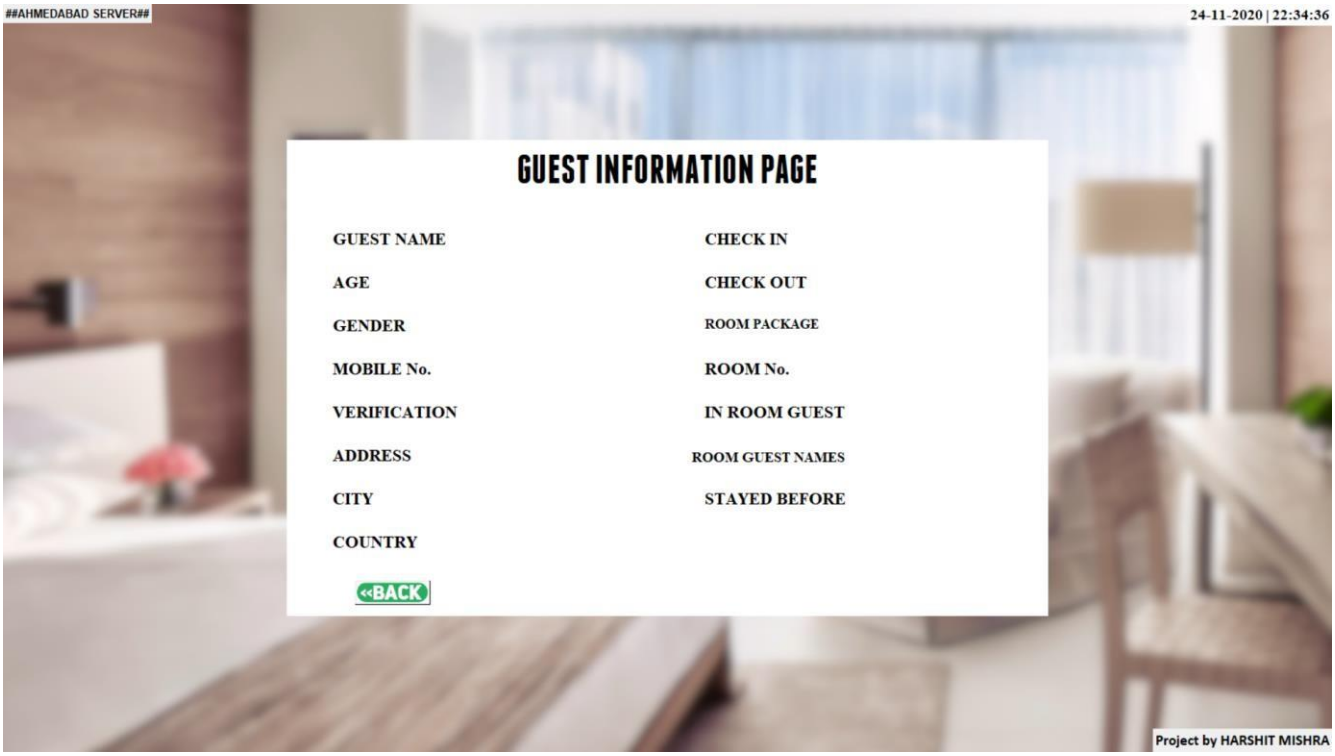
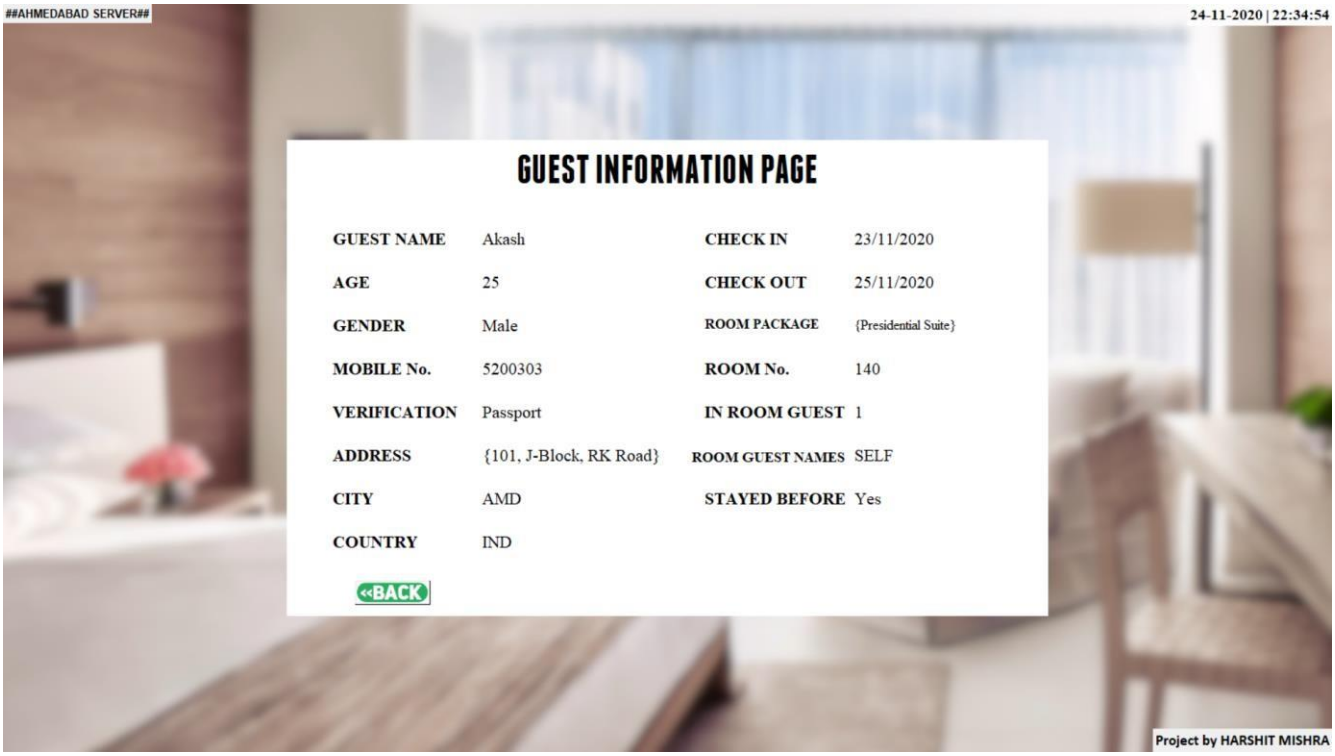
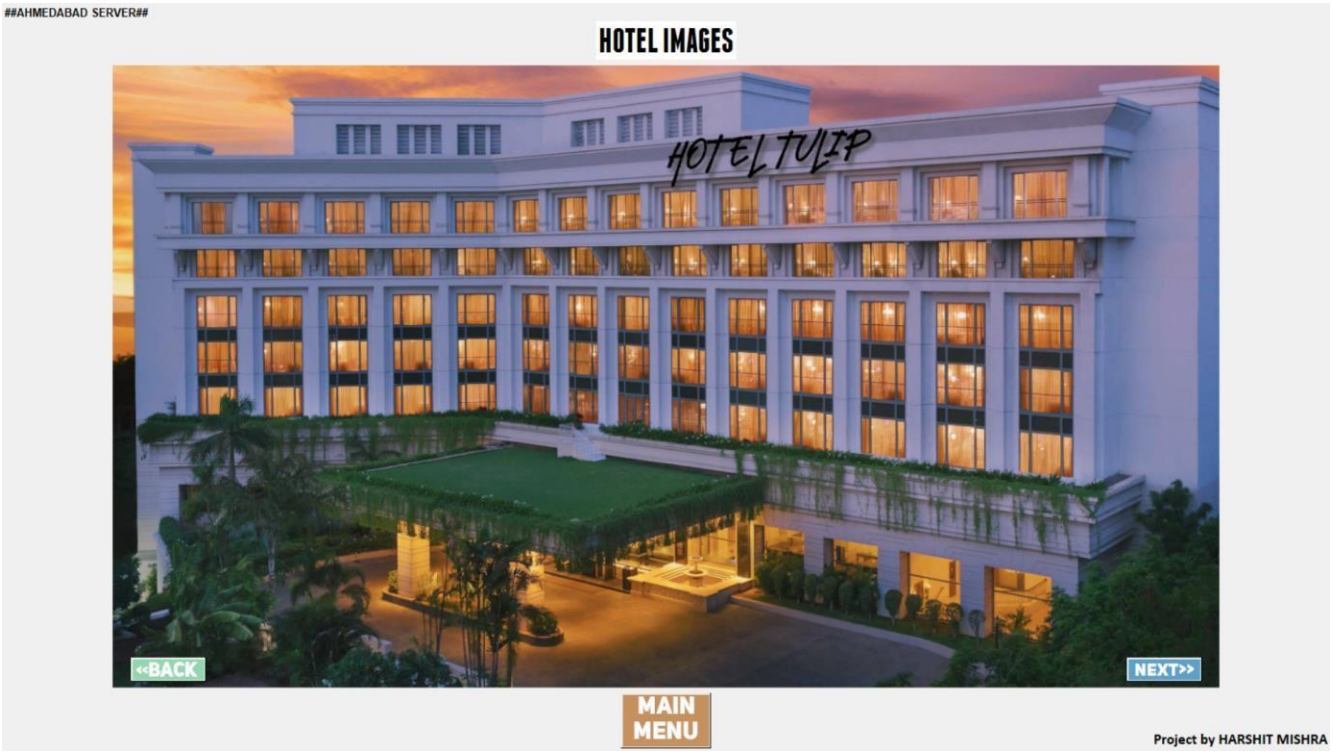
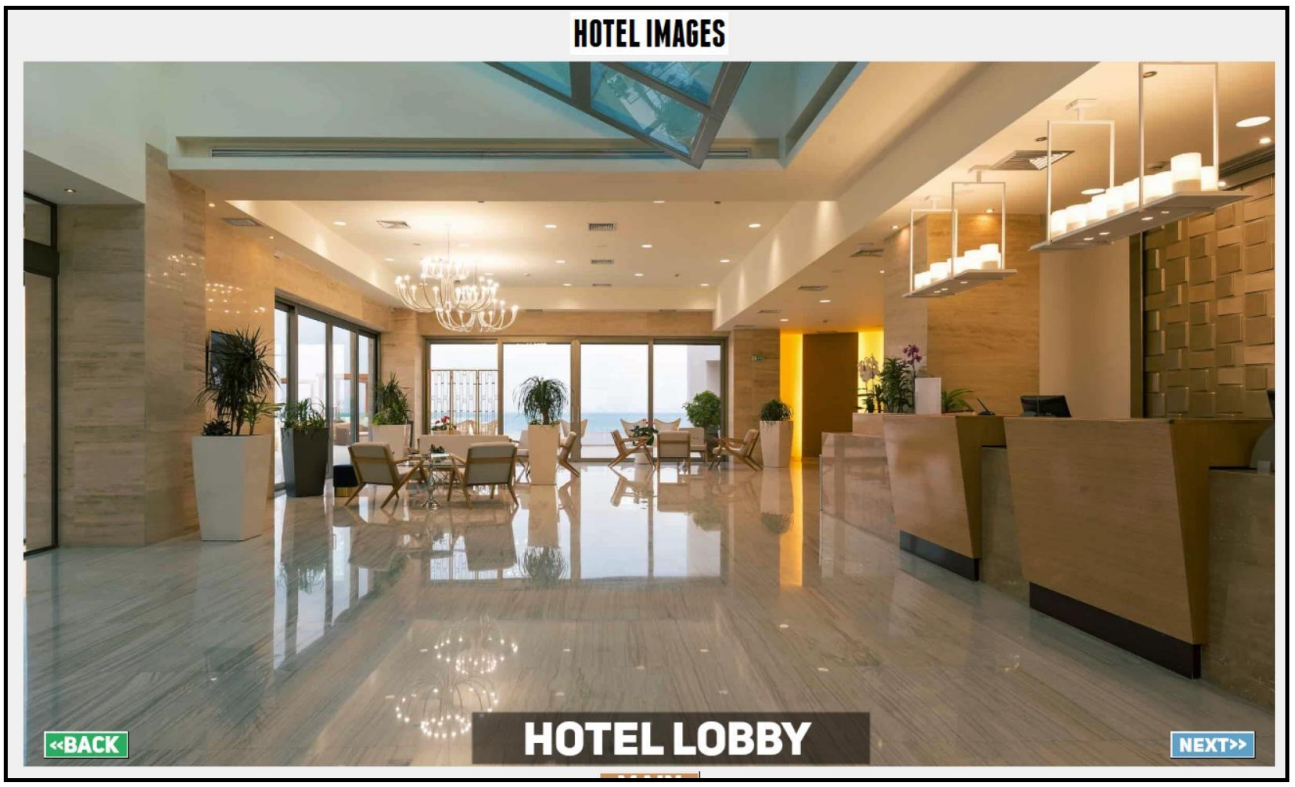


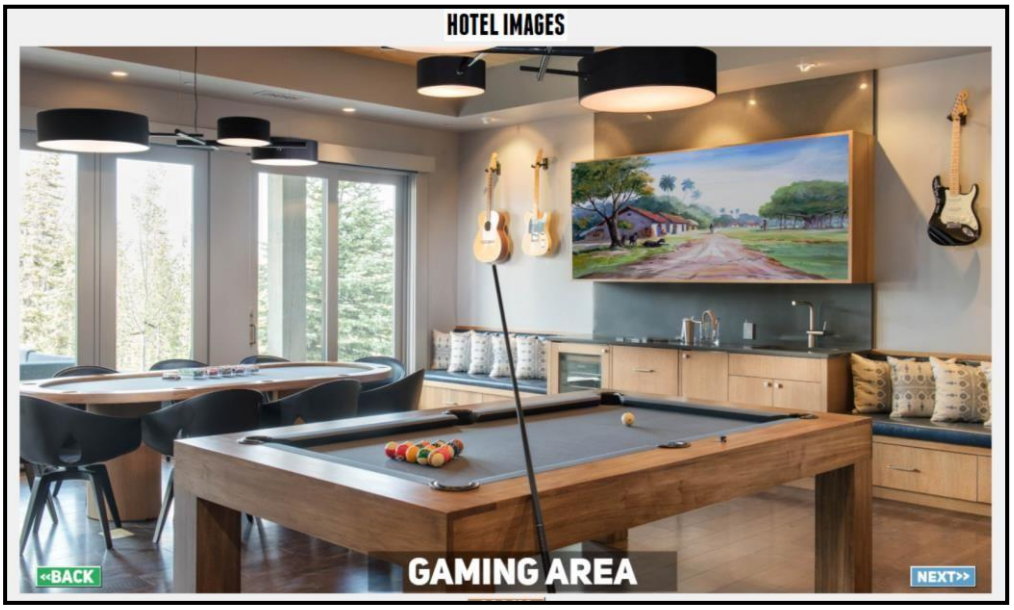


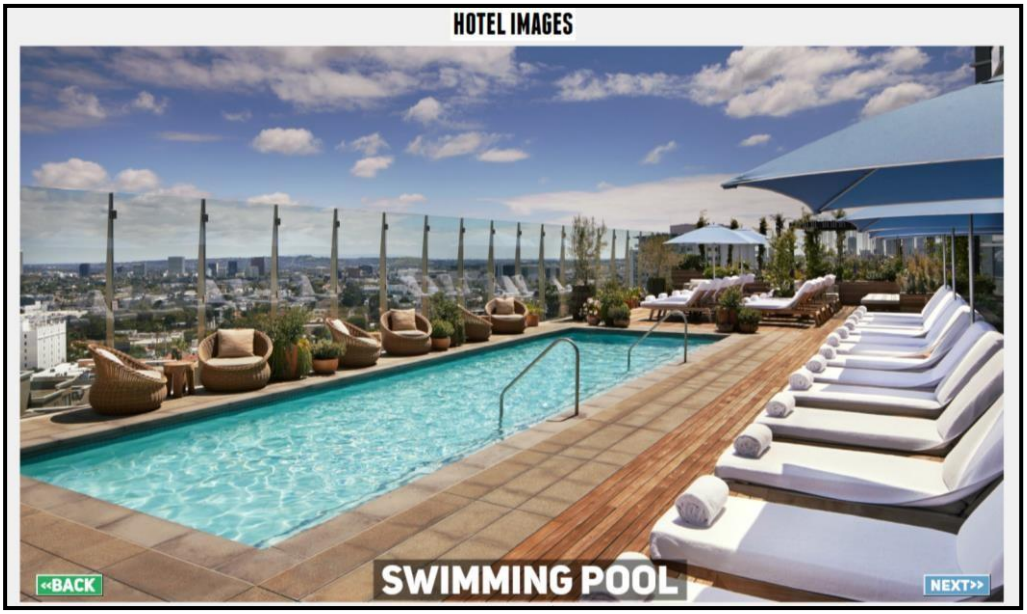
4. HOTEL IMAGES:






HOTEL IMAGES
TULIP
Bar
«BACK
HOTEL RESTAURANT
NEXT»


HOTEL IMAGES
«BACK
GAMING AREA
NEXT»


HOTEL IMAGES
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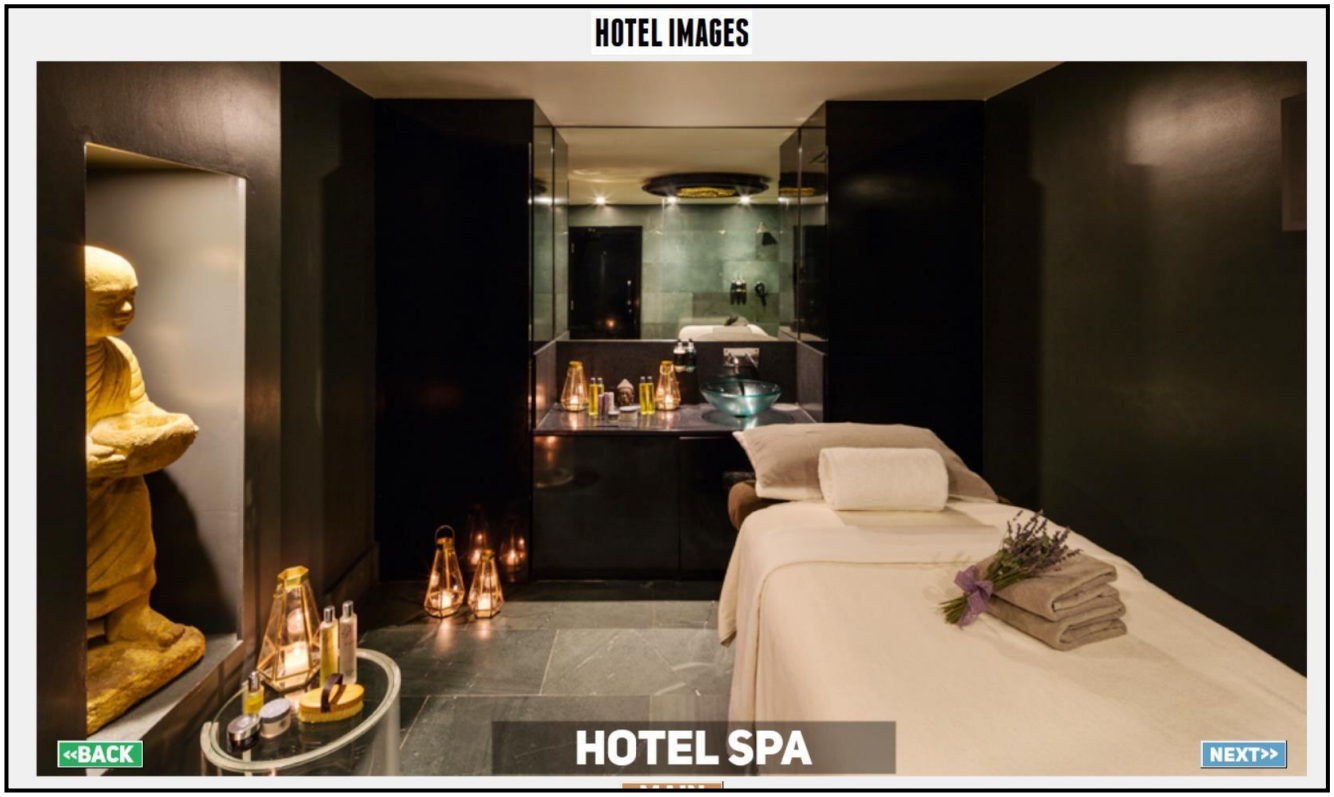
SWIMMING POOL
NEXT»


HOTEL IMAGES
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HOTEL SPA
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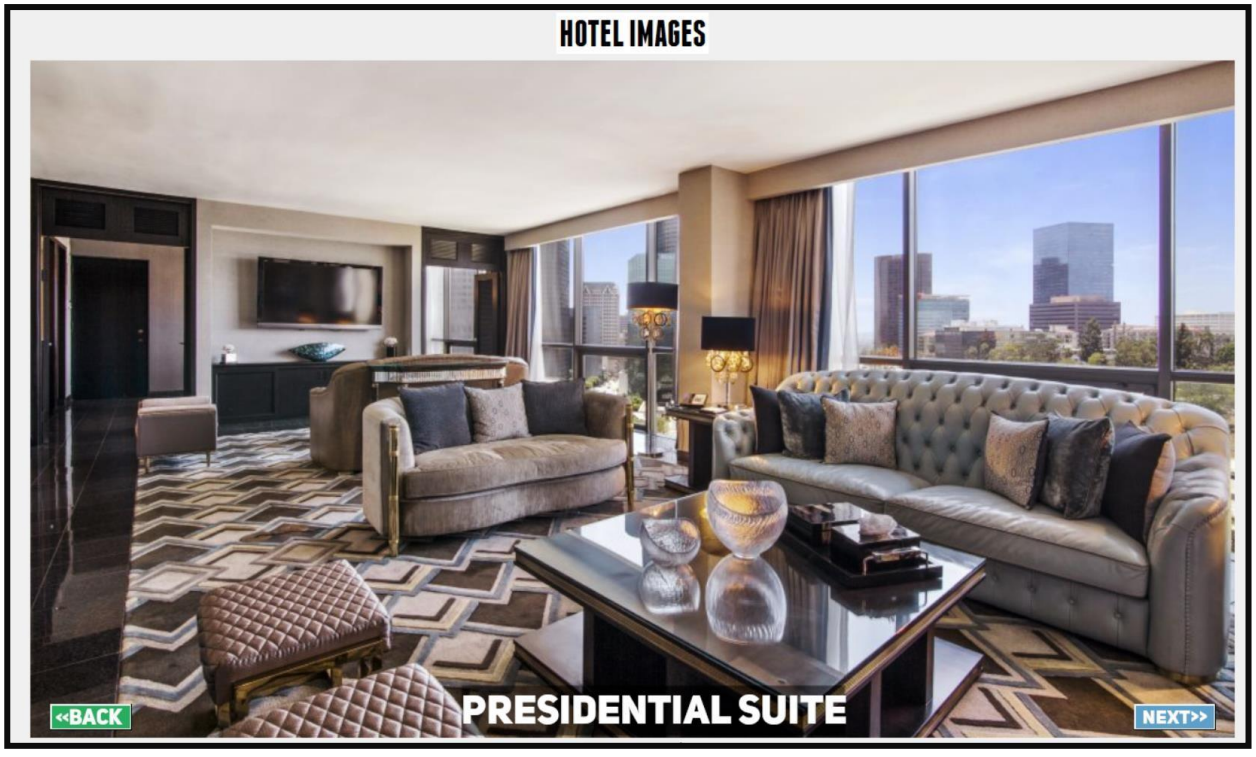
HOTEL IMAGES
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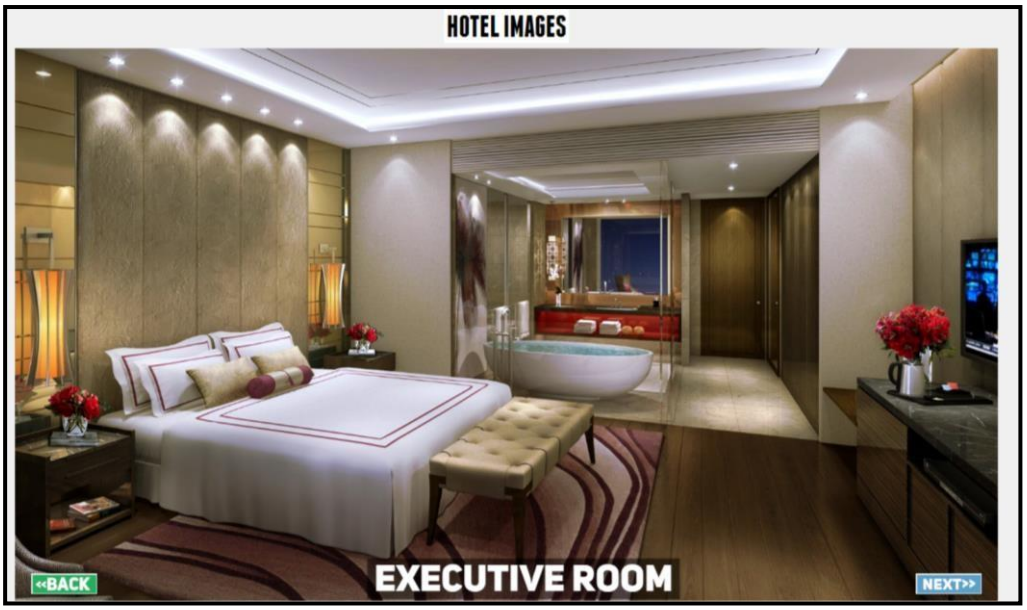
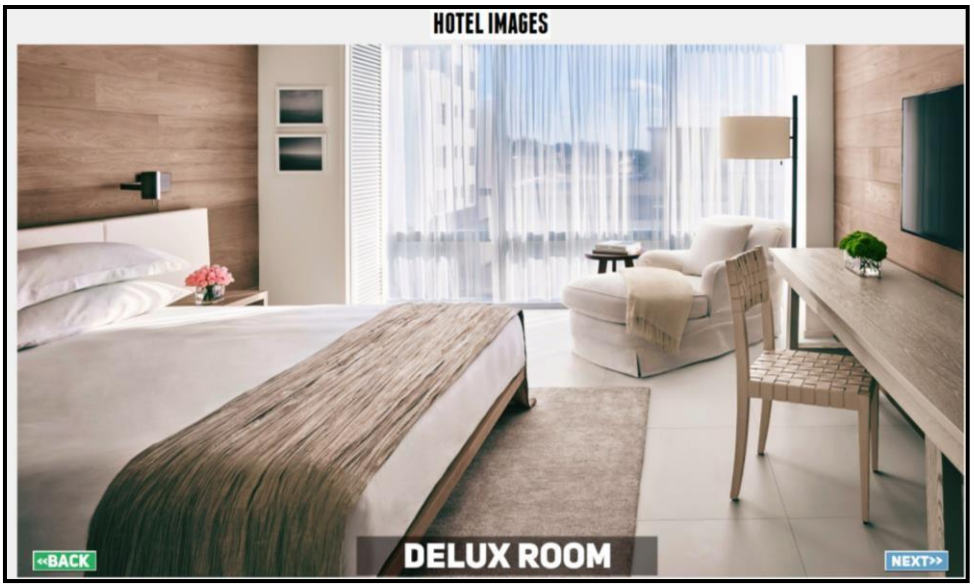
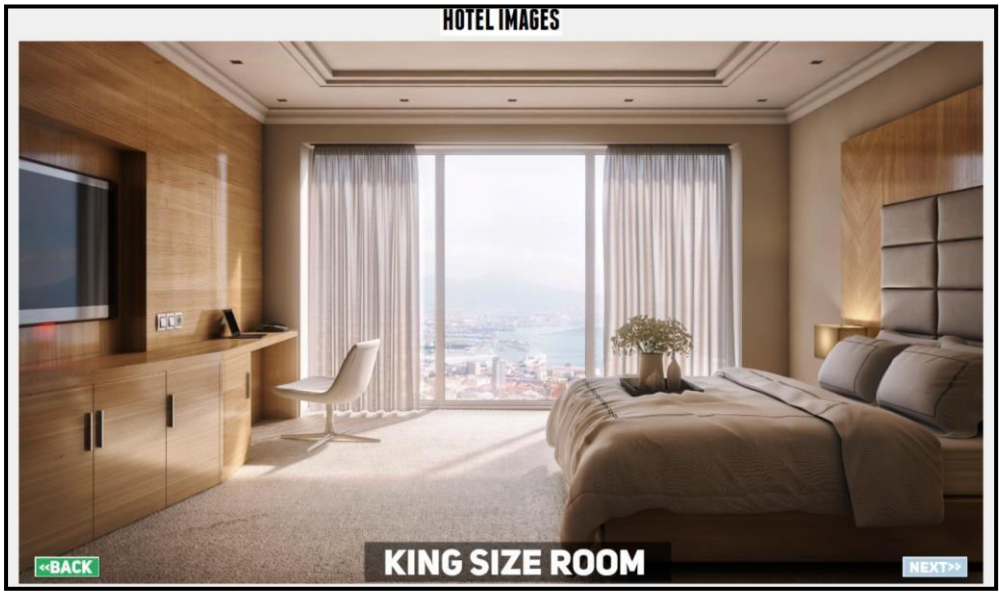
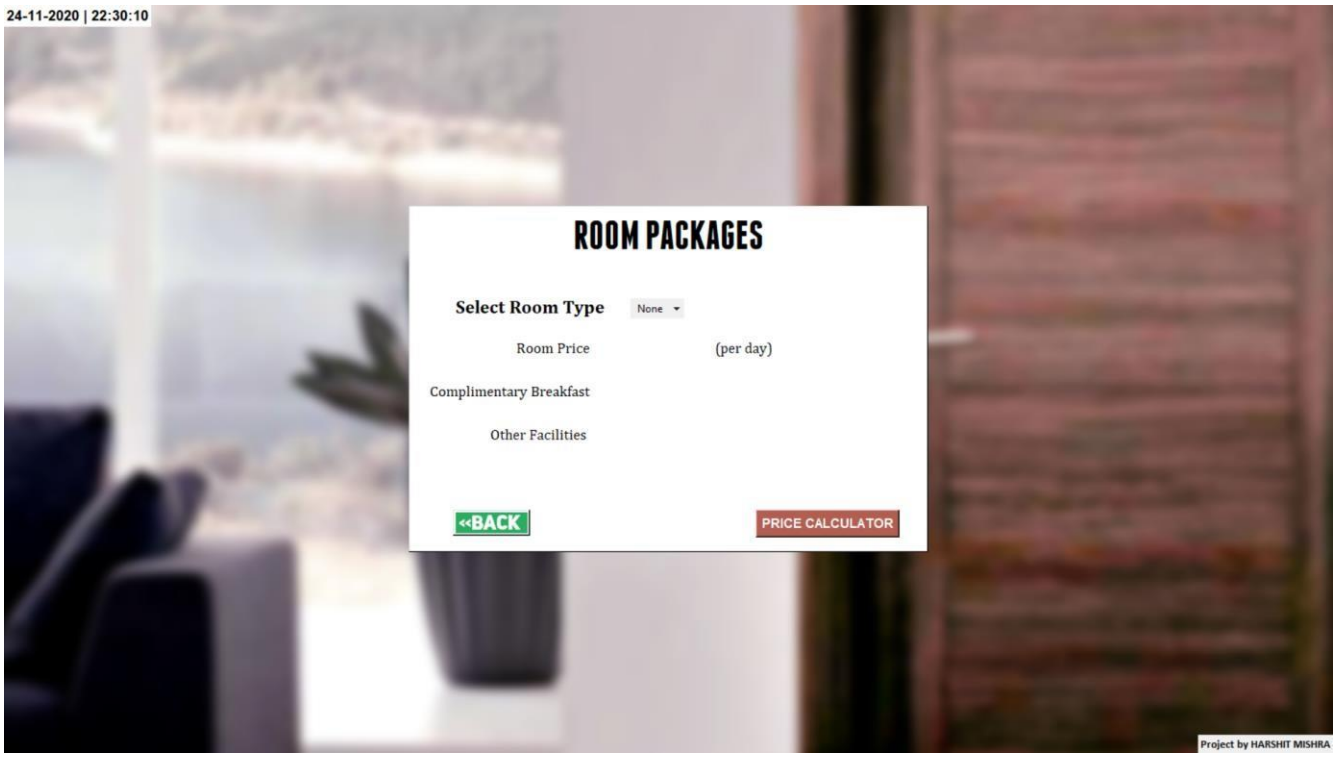
PRESIDENTIAL SUITE
NEXT»

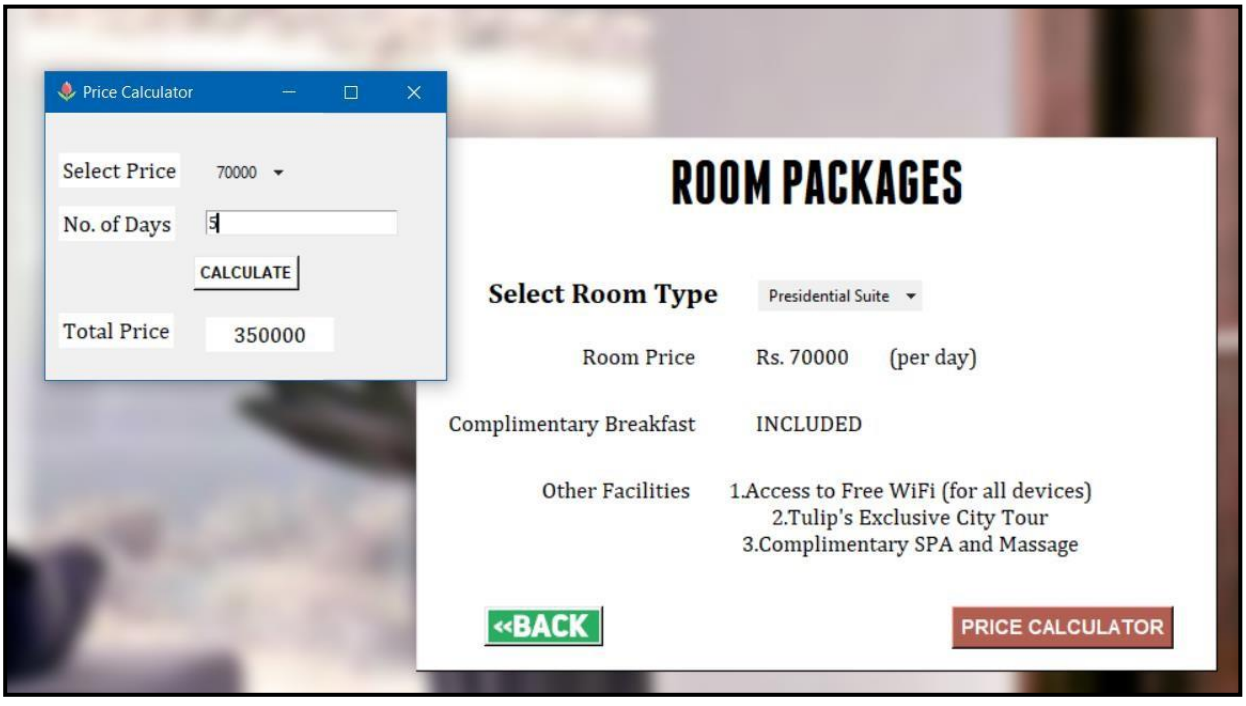

HOTEL IMAGES
«BACK
EXECUTIVE ROOM
NEXT»

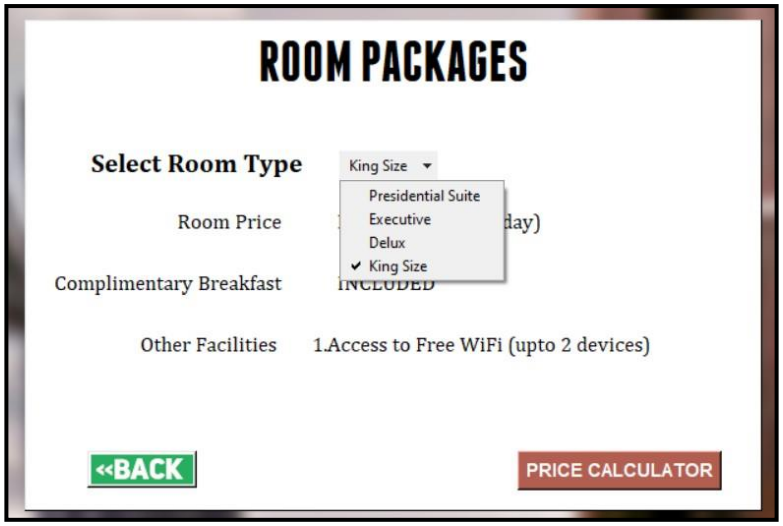

HOTEL IMAGES
«BACK
DELUX ROOM
NEXT»

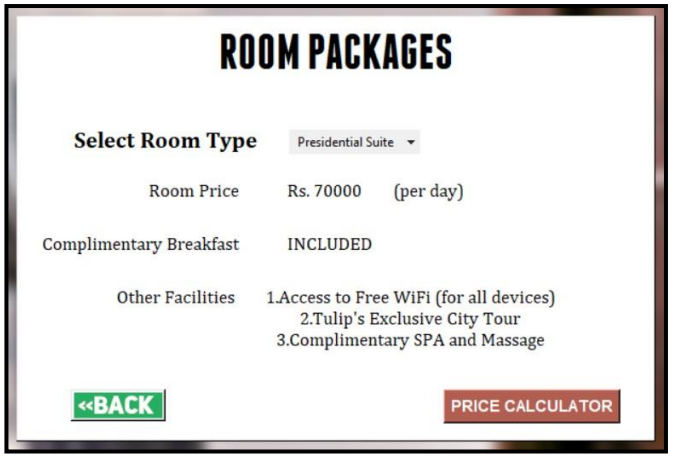

HOTEL IMAGES
«BACK
KING SIZE ROOM
NEXT»

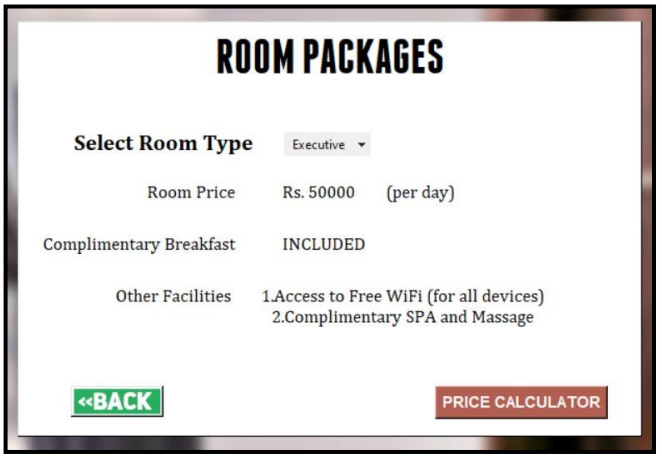
5. ROOM PACKAGES:

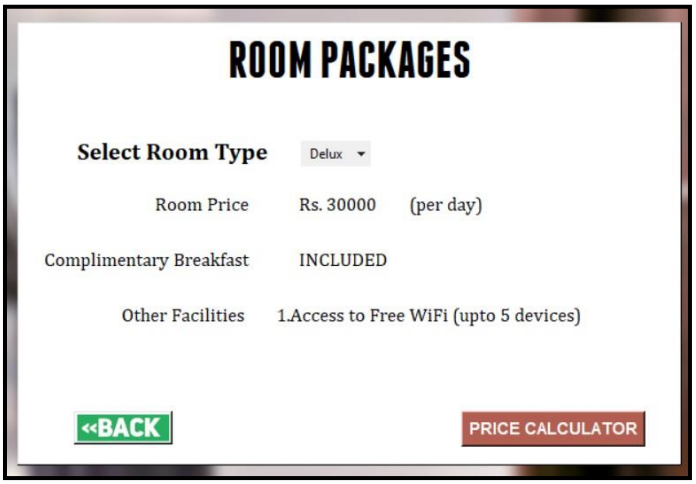


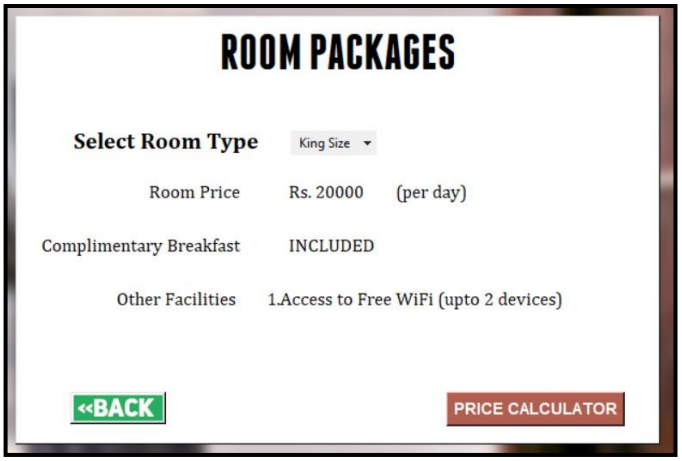



ROOM PACKAGES
Select Room Type
King Size
Presidential Suite
Executive
Delux
King Size
Room Price
day)
Complimentary Breakfast
INCLUDED
Other Facilities
1.Access to Free WiFi (upto 2 devices)
«BACK
PRICE CALCULATOR

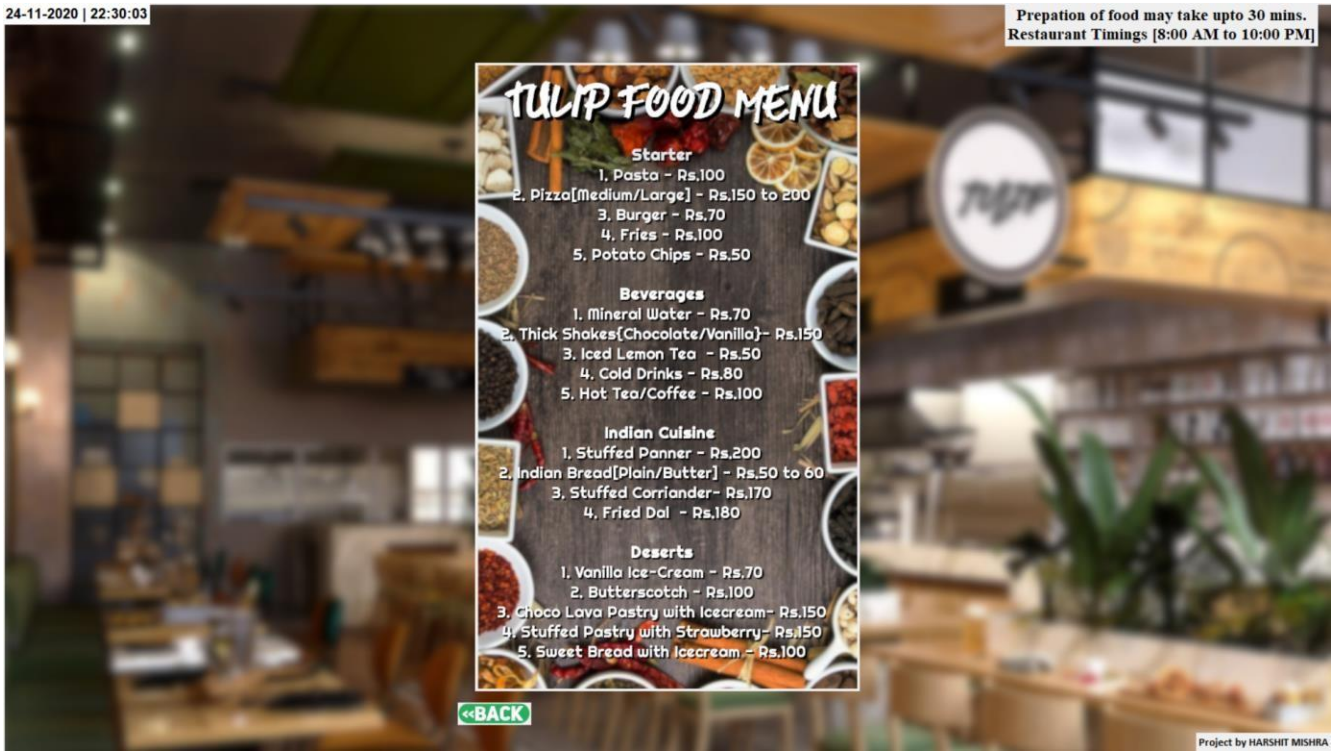

ROOM PACKAGES
Select Room Type
Presidential Suite
Room Price
Rs. 70000
(per day)
Complimentary Breakfast
INCLUDED
Other Facilities
1.Access to Free WiFi (for all devices)
2.Tulip's Exclusive City Tour
3.Complimentary SPA and Massage
«BACK
PRICE CALCULATOR


ROOM PACKAGES
Select Room Type
Executive
Room Price
Rs. 50000
(per day)
Complimentary Breakfast
INCLUDED
Other Facilities
1.Access to Free WiFi (for all devices)
2.Complimentary SPA and Massage
«BACK
PRICE CALCULATOR


ROOM PACKAGES
Select Room Type
Delux
Room Price
Rs. 30000
(per day)
Complimentary Breakfast
INCLUDED
Other Facilities
1.Access to Free WiFi (upto 5 devices)
«BACK
PRICE CALCULATOR


ROOM PACKAGES
Select Room Type
King Size
Room Price
Rs. 20000
(per day)
Complimentary Breakfast
INCLUDED
Other Facilities
1.Access to Free WiFi (upto 2 devices)
«BACK
PRICE CALCULATOR

6. IN-HOUSE FOOD MENU:



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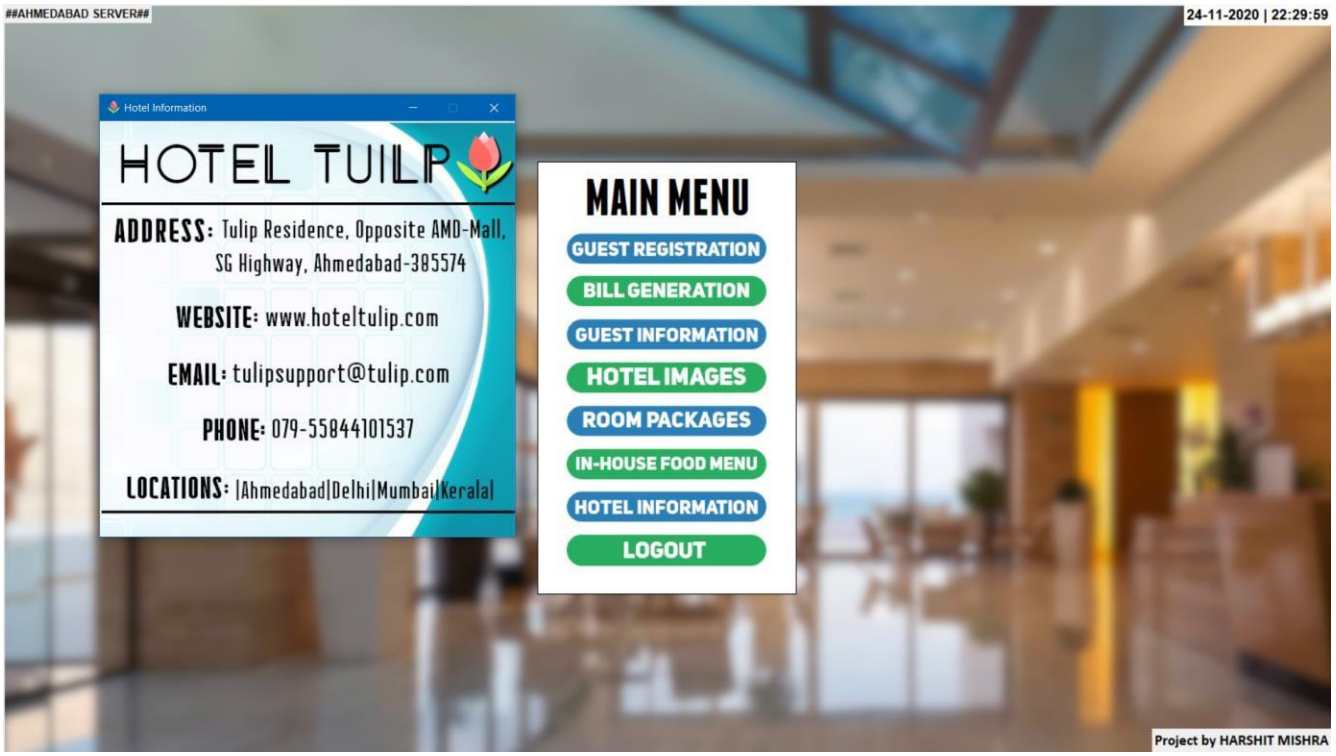

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