Online Temporary Residancial Facility Reservation System

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Version 1.2

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# **Executive Summary**

The Open University of Sri Lanka (OUSL) is the premier Open and Distance Learning (ODL) institution in Sri Lanka where students can pursue their studies in ODL methodologies. Currently the OUSL serves larger population of students from all over the country. The OUSL provides residential facilities for outstation students for participation in-campus academic activities.

Currently the university hostel room booking done manually and does not have an online facility reservation system. First, student should come to the OUSL to get the hostel card and register for the hostel reservation and must check for the availability of the rooms in the hostel before the reservation. Hostel staff faces many issues due of lack of information at hand when reserving a room for a student such as;

* **Lack of student information** – whether the student has obtained the studentship, hostel card or not. Student can only stay for two nights by paying Rs.100.00 when s/he does not have the hostel card. This could be an advantage to the student where s/he could pay only this amount as saying that s/he could not obtain the hostel card yet and the staff can’t find whether this student has stayed before or not.
* **Count of reservation done by a student** – to check whether the student has exceeded the annual or consecutive stay at the hostel.
* **Clarification whether a student has academic activities or not** – student get the facility only when s/he has an academic activity.
* **Whether the student has exceeded the limit of consecutive staying** – a hostel card contains only 20 rows and if it is filled student should get a new hostel card. Some students take this as an advantage to stay more than the consecutive staying limit at the hostel by not bringing the previous hostel card. So the staff could not know how many days the student has stayed in the previous card.

Visit the following link for more rules and regulations of the OUSL hostel booking information - http://www.ou.ac.lk/home/images/student/Rules\_20and20Regulations\_20-TRF.pdf

The purpose of this document is to provide proposal for the Online Temporary Residential Facility Reservation System (OTRFRS) implement by the CODEMO team.

# **Product Description**

## **Problem we solve**

Online room reservation is becoming very popular method in the present. Students can reserve a room from home using online system to facilitate at different dates and for a consecutive period. Currently student should come to the university and make the payment to obtain a hostel card to use the residential facilities. Due to limited facilities available, the accommodations are given in first come first serve basis. At the examination days the student count at the hostel premises is high. Very limited students will be able to accommodate at the hostel. Hence, the students get to know about the hostel reservation only when they come to the university and will be very late to check for another accommodation. If the university has the facility to update hostel information real time will be good for betterment of the student life.

## **About the product**

The software is an online system which will developed using following programming languages,

* Html
* CSS
* Java-Script
* PHP
* MySql (for database)

The OTRFRS, is a computerized system which stores and distributes information of a hostel facilities. The OTRFRS booking system offers assistance to hostel staff to manage all of their manual process where they can upload their information and service availabilities to be seen by students.

Content consists of Reservations, Profiles, Rooms, Rate and Inventory Control, Administration. Information commonly stored in a the system consists of Room Types (guarantee, deposit, customized cancellation rules, minimum length of stay, maximum length of stay, closed to arrival, arrival not allowed, departure not allowed, etc.,), Room inventories, Generic hostel information (address, phone number, fax number), Reservation information. The Reporting module provides a number of standard reports. System reports may be generated automatically and may be run daily, weekly, monthly, yearly. It includes Expected Arrivals, Reservation, Total Booking Activity, Stay Activity, Monthly Booking Activity and Property Detail.

## **Unique Features**

The proposed system is a web-based application which allows students to make enquiries online and reserve facilities providing the required details. The following solutions are in the proposed system brings on board:

* Well laid out information about the hostel.
* The manual booking system is replaced with an online reservation system.
* Student can view the availability of the facility
* Hostel staff can view reports at any time to tell the current situation in order to put the necessary measures in place.
* Inform the students who does not have the required distance for reserve facility.
* Cancel booking
* Change rooms
* The system helps secure student information since no information is disposed off
* An about us page is designed to allow student to get all necessary information about the hostel and its facilities. A contact us page is provided where students can send emails.

This study has been categorized into following groups:

* System monitoring done by system administrator
* Filling forms to make enquiries and reservations
* Approving or deleting enquiries balance

## **SWOT Analysis**

**Helpful Harmful**

|  |  |
| --- | --- |
| **Strength**  **E.g.**   * User friendly interface * Uniqueness * Fast and effective than the manual system * Can be operated at any time | **Weaknesses**  **E.g.**   * Support during the starting period of the system * No experience in this domain * Poor customer relationship * Little collaboration * Some doesn’t have the facilities to use internet |
| **Opportunities**  **E.g.**   * Book rooms at anytime * Facility to check availability of rooms * Increment of internet users | **Threats**  **E.g.**   * Might be difficult for inexperienced computer users. * Change of an existing requirement |

OUSL is the only one university in Sri Lanka provide ODL facilities. Hence, it has different learning methodologies. OUSL provide hostel facility based on the student request with the approval of respective lecturer. We only came across this requirements only from the OUSL. Due to that we have not seen any available system as a competitor for our OTRFRS.

# **Marketing/Sales Strategy**

Our initial thought is finding local buyers in our home country. The best place to start would be the government Universities, private campuses, other institutes/ companies that requires booking system. As there are many online booking websites we concluded to follow following marketing strategies,

* Offer free trail

We will offer our website to the customers for free for a limited time period to provide something to help customers see that our product will work for their requirement. Once they have come to rely on our product, they won’t want to give it up and buy our product. And customers who love our product will tell others about both our product and the trial, resulting in positive word-of-mouth recommendations and more trial sign-ups.

* Consider freemium model

We can give some of our services for free which allows free access to basic features with the option to access premium features for an upgrade cost.

* Offer a money-back guarantee

In pursuit of gaining a competitive advantage in crowded industries, we could offer money-back guarantees

* Include a phone number, email address, on our Website

By adding our identity to our Website, we can increase sales by those who see our product.

# **Product Development**

## **Minimum Viable Product (MVP)**

Date of release: 01.01.2020

Features included in the MVP

* Book a room
* Check the minimum distance to full fill the university rule
* Check payments
* Check the consecutive stayed days and total stayed days
* Restrict to book more than the limited consecutive days
* Generate reports of TRF reservation.

## **Beta Version**

Date of release: 20.01.2020

Features included in the beta version

* reserve rooms
* check availability of rooms
* shift booked rooms
* cancel reservations
* block student accounts
* update facility details

## **Final Version**

Date of release: 05.02.2020

Features included in Final version

* Student can reserve a room
* Check the minimum distance to full fill the university rule
* Check payments
* Check the consecutive stayed days and total stayed days
* Restrict to book more than the limited consecutive days (admin users)
* Update facility details (admin users)
  + - reserve rooms (admin users)
    - check availability of rooms (admin users)
    - shift booked rooms(admin users)
    - cancel reservations (admin users)
    - block student accounts (admin users)
* Generate reports of TRF reservation. (admin users)
* Speed improvement
* Better UI

# **Staffing and Operation**

## **Management Organization Chart/ Work distribution among team members**

Operation Plan

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Year |  | 2019 |  | 2020 |  |  |  |  |  | | | |  | | |  | |  | |
| **Activity** | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April | May | June | July | Aug | Sept | | | Oct | | Nov | | Dec | |
| Form Groups | 21 |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Assign mentor | 23 |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Project proposal submission |  | 23 |  |  |  |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Submission of SRS |  |  | 7 |  |  |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Progress report 1 |  |  | 7 |  |  |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Progress report 2 |  |  |  | 7 |  |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Progress report 3 |  |  |  |  | 7 |  |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Final Submission |  |  |  |  |  | 14 |  |  |  |  |  |  |  |  | |  | | |  | |  | |
| Demonstration day |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  | |  | | |  | |  | |

# **Milestones and Reporting**

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestone** | **Responsibility** | **Milestone Deliverables** | **Deliverable Date** |
| **Milestone 1 : Form Groups** | A selected team member from each team | Google Form Submissions | 21st of August 2019 |
| **Milestone 2 : Assignment of Mentors** | Course Coordinator | Inform via Email/Moodle | 23rd of August 2019 |
| **Milestone 3 : Project Proposal Submission** | One submission from the team(Soft copy and the Hard copy) with the approval of the mentor | Project Proposal(Template) | 23rd of September 2019 |
| **Milestone 4 : Software Requirement Specification(SRS)** | One submission from the team(Soft copy and the Hard copy) with the approval of the mentor | SRS(Template) | 7th of October 2019 |
| **Milestone 5 : Progress Report 1** | One submission from the team(Soft copy and the Hard copy) with the approval of the mentor | Design Document  High Level Architecture  UML Diagrams(Structure & Behavior)  Database  GUI  Appendix  Reflective Journal  Meeting Minutes | 7th of October 2019 |
| **Milestone 6: Progress Report 2** | One submission from the team(Soft copy and the Hard copy) with the approval of the mentor | Design Document  Revised Architectural Diagram  Revised UML Diagrams  Test Plan  Appendix  Reflective Journal  Meeting Minutes | 7th of November 2019 |
| **Milestone 7: Progress Report 3** | One submission from the team(Soft copy and the Hard copy) with the approval of the mentor | Report  Progress of the implementation  Appendix  Reflective Journal  Meeting Minutes | 7th of December 2019 |
| **Milestone 8 :**  **OCAM Marks** | Course Coordinator | Announce OCAM Marks | 31st of December 2019 |
| **Final Report Submission** | One submission from the team(Soft copy and the Hard copy) with the approval of the mentor | Report  Background of the Project  Literature Survey & Competitor Analysis  Design  Development  Test Results  Conclusion  Appendix  SRS  Design Documents  Reflective Journal  Meeting Minutes | 14th of January 2020 |
| **Demonstration Day** | Demonstration of the prototype | Software Installation Package burnt in to a CD with instructions to install the software(Readme file) | 20th of January 2020 |