**KATHMANDU UNIVERSITY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

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**A PROJECT PROPOSAL ON**

**HOTEL MANAGEMENT SYSTEM IN RURAL NEPAL**

**ENGG 102**

**(For partial fulfillment of second semester in Computer Engineering)**

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**Abstract**

Since, Nepal’s economy is largely engulfed by the tourism sector, out of which the rural areas have been visitor’s favorites spot and these places welcome thousands of national and international tourists every year. Despite such a huge addition to the nation’s economy, there hasn’t been much progress in this sector especially the use of technology to improve service and overall development. Hoteliers have been facing problems managing tourists and getting proper exposure whereas tourists are facing problems getting proper homestay/ hotel. Due to a lack of proper management in terms of contact, booking, payment, and facilities, Nepal’s tourism sector has been suffering a decline.

This project in engraved with the concepts of providing hoteliers with a platform where they regulate and administer their management, booking, payment, and so forth. Tourists can also benefit from exercising the facilities available. Considering all these problems we have decided to develop a platform which will help hoteliers be more organized and managed.

Since some of our group members have prior knowledge or have come across the issues of hotel management in rural Nepal, we choose to eradicate these problems. Using the important concepts of C++ such as file handling, function, loops, array, structure, class, objects and so on, this management system will feature an interactive interface which provides various option like booking a room, checking customer’s detail, editing and deleting any customers and more information about all the facilities available in the hotel. This project still under development aims to make this accessible for which it must be made available in smartphones too.

Keywords : Object Oriented Programming,

**TABLE OF CONTENTS**

**TITLE PAGE NO.**

Chapter 1: Introduction……………………………………………………………….1

1.1: Background…………………………………………………………………2

1.2: Objectives…………………………………………………………………...3

1.3: Motivation and significance…………………………………………………4

Chapter 2: Related work………………………………………………………………………5

Chapter 3: Procedures and method……………………………………………………………6

Chapter 4: System requirement specification............................................................….......7

4.1: Software specification…………………………………………….8

4.2: Hardware specification…………………………………………….9

Chapter 5: Project planning and scheduling ………………………………………………11

Reference …………………………………………………………………………………..15

**List of figures**

Figures Page no

5.1 Gantt chart…………………………………………………………………….15

List of tables

Table page no

5.1 Work division ……………………………………………………………….14

**Acronyms/abbreviations**

1. KU : Kathmandu University
2. IDE : Integrated Development Environment
3. OS: Operating System
4. PC: Personal Computer
5. HMS: Hotel Management System

**Chapter 1: introduction**

* 1. **Background**

There has been remarkable improvement in hotel industry both in terms of service and management. The evolution of computer and internet has simplified hotel’s operation by automating them. From front desk reservation to accounting management, HMS has offered unmatched flexibility in managing business and automation of hotel operation. Nepal, being a potential tourism destination, has also adopted HMS to ease operation. But this limits to only hotels in cities, hotels in rural areas are still not benefitted from the boon of internet and computer. It’s seen that they are still dependent on paper-pen, phone calls, scripting on calendar for management of operations which is easily done by software.

Globally the HMS has been improving with the improvement of technologies. Hotelogix, Maestro PMS, Cloudbeds, eZee frontdesk etc are some prominent HMS used around the world and in Nepal too. But due uneven development of infrastructure and uneven distribution of technological services, the rural areas of Nepal which welcomes thousands of tourists has not been able to exercise internet and computer in their services. The digital divide gap is very high in context with rural Nepal. Our project aims to reduce these gap by making HMS accessible in rural Nepal. The project is a partial version with a view to expand it in the upcoming years.

* 1. **Objectives**

This project aims at ease maintenance with low-end hardware and resources, and to improve services in hotel industry as whole. As a part of curriculum, this project is the partial fulfillment of Engineering Project (ENGG 102) enhancing our knowledge in programming and project management.

The fundamental objectives of the program are listed below:

* Enable hotels of all sizes and types to manage their day-to-day functions with limited knowledge of technology.
* Provides service like managing accommodation, customer’s details, check-in, and other modules.
* To make it user friendly
* If possible, make it available as a mobile application.
  1. **Motivation and significances**

1. Since, Nepal’s economy is largely engulfed by the tourism sector, out of which the rural areas have been visitor’s favorites spot and these places welcome thousands of national and international tourists every year because of villager’s pure and selfless hospitality. Despite such a huge addition to the nation’s economy, there hasn’t been much progress in this sector especially the use of technology to improve service and overall development. Hoteliers have been facing problems managing tourists and getting proper exposure whereas tourists are facing problems getting proper homestay/ hotel. Due to a lack of proper management in terms of contact, booking, payment, and facilities, Nepal’s tourism sector has been suffering a decline. Mainly hotels are getting improved in cities but tourist who came from developed country having experience of 7 star hotel seeks hospitality of small village where people treat them as guest not as a costumer because Nepal is famous for it’s a quote “aatithi debo babha”. Its means guests are god and we should treat them as god. These culture are still maintained in remote areas of Nepal. But villagers are opening hotels by their own with risk of loss due to lack of skills. We are also from those small villages where tourist comes for homestay but feels difficulties in terms of safety and hygiene. Also the villagers don’t feel safe and don’t understand their language to help them. Hoteliers cannot keep proper record of their hotel business due to which they suffer loss in business or with no improvement in service at all. So we get motivated from our community to solve these problems to make a good platform for both tourist and villagers so that villagers could serve tourist perfectly and profitably. This project is mainly focused to make tourist ease to find proper homestay, could order food items of their choice in reasonable price, could find guides, exercise overall facilities available. It will also help villagers to keep track of tourist, feels safe, could earn good amount of money and to share their culture and norms with tourist.

**Chapter 2: Related works**

Tourism is the world’s fastest growing industry. Nepal is one of the most beautiful countries in the world with snowcapped mountains, varieties of tourism resources places with natural beauty, historical and cultural monument, art and architecture by we are able to welcome thousands of tourist every year. In Nepal, ministry of cultural tourism and civil aviation (MOCTCA) are responsible for policy, planning, regulation and monitoring of the tourism industry. These ministry are doing their best to develop the tourism sector in Nepal. They are somewhat successful in doing that but the use of technology and the boon of internet are not exercised to full extent. The website of Nepal Tourism Board has been contributing in the advertisement of Nepal’s tourism. This platform has helped tourist around the globe regarding navigation, choosing places to visit. In the hotel of rural the physical development like arrangement of table and chair for tourist comfort, menu of dishes in English language for better communication and well maintained hygienic rooms with selfless hospitality the tourist fell ease to travel and don’t need to worry about food, shelter in Nepal. Even on the topic “Rural hotel and tourism development” there are many proposal written by different student, professor which can be found on internet. Even foreign student visit Nepal to write their proposal which makes Nepali culture, nature, tradition to gets explored among readers. These article make Nepal a country of beauty. According to world economic forum (WEF) 2015 report Nepal is on 102 rank which shows improvement as in 2013 Nepal was on 122 rank. Despite these acknowledging improvement, we still lack in the use of modern technology in hotel industry and other fields too. Although vast accessibility of HMS, usage are only limited to Hotels in city areas. It’s a matter of fact that literacy rate of rural Nepal is comparatively less which promotes digital divide.

**Chapter 3: Procedures and Methods**

**3.1 Requirement Gathering**

With the basic idea of what’s needed to accomplish this project, requirements in form of hardware and software is to be gathered. These includes IDE, Compiler, Version Control and remote repository.

**3.2 Work Distribution**

Understanding each member’s capabilities and resources, various part of the project will be distributed. However, we ought to use remote repository as our common platform for interaction as well as merging our project. Use of social media for communication is needed for proper flow of the project.

**3.3 Interface Design**

Interface with which the user interact is key of the project. Understanding each others concept of design, we will be creating a design which is satisfying for all the members. We will be using platforms like Adobe InDesign for ease and to limits time consumption.

**3.4 Actual Coding**

Each members shall be assigned some portion of the project and will be pushing changes in GitHub. Group members will be using their favorite IDE and will finish their respective assign task.

**3.5 Testing and Debugging**

After finishing coding, we shall merge every portion and will go for alpha testing. This step is crucial to wrap-up the program. Bugs found shall be removed for smooth functioning of the program. Test shall be carried out again and again until the program runs efficiently.

**3.6 Documentation**

To assure continuity, documentation of every portion shall be done in case of need.

**Chapter 4: System requirements specification**

**4.1 Software specifications**

O.S.: GNU Linux and Windows 10

IDE: Visual Studio Code

Programming Language: C++

Compiler: GCC

Version Control: Git

Other: GitHub, MS-word, etc

**4.2 Hardware specifications**

Since, the purpose of the project is to just get familiarize with Object Oriented Programming, there has not been use of sophisticated devices to make this project possible. Simple PC is much more than enough for this project.

**Chapter 5: Project Planning and Scheduling**

**5.1 Work division**

|  |  |  |
| --- | --- | --- |
| **S.N** | **Task** | **Team Member** |
| 1 | Problem Identification & planning | all |
| 2 | Requirement gathering | Sujit K.C, Ashok Jaiswal, |
| 3 | Core programming | all |
| 4 | Testing | Jamyang Gelek, Aditiya Jha,Sujit K.C |
| 5 | documentation | Jamyang Gelek, Ashok Jaiswal |

Table 5.1: Work division

**5.2 Time allocation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task summary** | **week** | | | | | | | **Duration**  **(week)** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Problem identification & Planning** |  |  |  |  |  |  |  | **1** |
| **Work division** |  |  |  |  |  |  |  | **1** |
| **Core programming** |  |  |  |  |  |  |  | **5** |
| **Alpha testing** |  |  |  |  |  |  |  | **2** |
| **Documentation** |  |  |  |  |  |  |  | **2** |

Figure 5.1: Gantt chart for time allocation

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