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**Proposal**

**For**

**Second Year Project**

**Bachelor of Science in Information Technology**

**School Management System**

**Submitted by:**

**Dorji GYELTSHEN (12190049)**

**Gyalpozhing College of Information Technology**

**Read carefully before filling the form.**

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.
2. Guidance notes in various fields should not be deleted.
3. Required information should be duly filled in the specified fields.
4. Required heads/fields which are not relevant to the project should be marked **N/A** (Not Applicable) or left blank and should not be deleted.

**Guidelines and Forms**

**Submission Procedure**

Duly filled proposal forms completed in all respects should be submitted in form of soft copy and a hard copy to project guide and project coordinator. On receipt of the applications the proposals will be evaluated by reviewer panel and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the evaluator’s recommendations.

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**Application for Final Year Project**

# 1. Project Identification

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| --- | --- | --- | --- |
| Reference Number: | | | |
| (for office use only) | | | |
| Project Title: SNA(School Notice APP) | | | |
|  | | | |
| Project Internal Guide: | | | |
| Name: | Sonam Wangmo | | |
| Designation: | Lecturer | | |
| Organization: | Gyalpozhing College Of Information Technology | | |
| Mobile # : |  | Tel. # : |  |
| Email: | [Sonamwangmo.gcit@rub.edu.bt](mailto:Sonamwangmo.gcit@rub.edu.bt) | | |
| **C1. Project External Guide:** | | | |
| Name: | **NA** | | |
| Designation: |  | | |
| Organization: |  | | |
| Mobile # : |  | Tel. # : |  |
| Email: |  | | |
| **C2. Student Group Lead:** | | | |
| Name: |  | | |
| Roll No: |  | | |
| Department: |  | | |
| Mobile # : |  | Tel. # : |  |
| Email: |  | | |

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| Organizations Involved in the Project: *(Please identify all affiliated organizations collaborating in the project, and describe their role/contribution to the project.)* | | | |
| **D1. Industrial Organizations:** | | | |
| *#* | *Organization Name* | | *Role / Contribution* |
|  | *NA* | |  |
| **D2. Academic Organizations:** | | | |
| *#* | *Organization Name* | *Role / Contribution* | |
|  |  |  | |
| **D3. Funding Organizations:** | | | |
| *#* | *Organization Name* | | *Role / Contribution* |
|  | *NA* | |  |
| Key Words: *(Please provide a maximum of 5 key words that describe the project. The key words will be incorporated in our database.)*  SMS(School management System), Administration, Teacher Details and Timetable. | | | |
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| Research and Development Theme:It is an independent platform that can be used for the sole purpose of School Management Application on for education system. This system works as a centralized database and application that can be easily access from anywhere based on the login credentials. Manual works can be transformed into digitalized way. Teacher and administration gain time saving administration tools. It will help teacher to keep track of class timetable and also they will able to view details of the teachers.As there are no apps dedicated to the education system which is an issue that all teachers have to go through hard copy. Though, websites exist for schools, it was very difficult for them to remember the website name. Our project is dedicated to developing apps so that we will be able to reduce any hurdles at minimal level as possible. | | | |
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| Project Status: (Please mark ☑)  ☑ New Modification to previous Project  Extension of existing project | | | |

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| Project Duration: | | |
| Expected Starting Date: | February 10,2021 | |
| Planned Duration in months: 6 months |  | |
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# 2. Scope, Introduction and Background of the Project

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| Scope of the Project: To develop a School Management System App with following features:System Scope:Login - Users will login once their credentials are verified with following features.UsernamePasswordSchool nameAdmin/TeacherView – Teacher login to the application with following features:Staff DetailsTimetableAdmin will login with the following features:Staff DetailsTimetableCreate AccountCRUD OPERATION- Admin will create, read, update and delete the information when required and also for teachers if necessary.User Scope: Scope of our project School Management System is limited to Gyalpozhing Higher Secondary School. |
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| Introduction (Project Background and Literature Review, Current State of the Art): *(Detailed summary of what all has been done internationally in the proposed area quoting references and bibliography. Please note that this section demonstrates the depth of knowledge of the project team and builds the confidence of the evaluators about capability of the team in achieving the stated objectives.)*  *(Please describe the current state of the art specific to this research topic.)*  **Project Background:**  Every organization, be it business or institutional, runs on information and has their own way of gathering, recording, storing and managing information. Trivially, all that is needed is a pen and a paper. However, it becomes cumbersome and time consuming task when large amount of information is involved.  Such has been the case for Bhutanese education system with all the information’s relying only on pen and paper. It is not only a long inefficient process but also a waste of resources. School Management Systems increase effectiveness and efficiency by saving time and facilitating development of alternative solutions for sophisticated problems (Vissher&Wild, 1997; Pegler, 1992).  Similarly, Teachers have to rely solely on hard copy details. Which means if the teachers want to know more information about his/her timetable and also about other teachers, he has to go through hard copy details.  The aim of SMS is to develop an information management application in school with a centralized database that can be reached by multiple users. The users are school administrators, teachers and even the Ministry of Education. SMS will bring big changes to the school management. Teachers and school administrators will use SMS to get more information. At the same time Ministry of Educations can access information from SMS.  School Management System (SMS) consists of tasks such as registering Teacher’s account, Staff details record keeping, get access to timetable. MS (School Management System) will replace the manual work for the school management.  **Literature Review:**  **E-Notice Board:**  Android Based College Notification System by Jadhav Komal, Sayyad Sana, Shinde Swapnali and Bhaldar Jasmin states that to replace the notice board with E-notice board. This project includes major activity entities: add notices, add staff record which is handled by Admin. The Admin can add, delete, and update them simultaneously on the online system. These can then be viewed by the students.    **How information technology adopted to fill the gap:**  The school administrative computer applications development, started in the late 1970s, during this phrase, the use of information technologies in educational institutions was used mainly to improve the efficiency of school offices, such as store student and staff data. The use of School Management Information Systems (SMIS) was one form of information technology adopted to fill the gap, due to its ability to generate data and its efficiency and effectiveness to save time and facilitate the development of alternative solutions for sophisticated problems.  **Student database management system:**  “Student Database Management System” by Ajay Shankar and Abhishek Kumar. They overhauled the existing Student Database Management System and made necessary improvement to streamline the processes. Administrators using the system can record and retrieve student’s information and manage their classes, including marking of attendance.  The information is sorted by the operators, which will be provided by the teacher for a particular class. This system will also help in evaluating attendance eligibility criteria of a student.(Saurab Kumar Jain; Umal Joshi; Bhapesh Kumar Sharma, 2010).  **Manual work transformed into digitalized way.**  “Development of Student Information System” by N.M.Z. Hashim and S.N.K.S.Mohamed has developed a system which focused on recording and updating the student data. The lecturers can check the student status and give remarks. They used RAD methodology to develop the system. The system was built to replace the manual work of arranging student information. (N.M.Z. Hashim; S.N.KS. Mohammed, 2013).  **Current state of Art**  As Bhutan is becoming more and more digitalized, the number of Smartphone users is increasing at an astonishing rate. There are 373.2 thousand internet users in Bhutan in January 2021. And the number of social media users in Bhutan was equivalent to 72.2% of the total population in January 2021 according to the website dataprotable.com. Still then, in Bhutan there is no School Management System App(SMS). Transcripts of Teachers are prepared manually by the OA (Office Assistance). Timetable and staff details are produced by the class management in hard copy. In order to get information of particular details and timetable of his/her, the teacher has to go through hard copy and also some information from management side.  Due to the inefficiency of the current manual system, the need arises to automate SMS in order to efficiently handle Staff details and timetable, to replace the manual school hard copy details, SMS with the following features will keep on track. Though there are websites for school still than they lack in giving the information of each individual Teachers and Timetable. |

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| Challenges: *(Please describe the challenges, specific to this research topic, currently being faced internationally.)*  **Developing an app without being proficient is hard:** Developing an app is not an easy task as to develop an app requires a lot of knowledge as well as it should be liked by the user.  **Resource Availability:** Need high speed internet connection and compatible devices for the development of app. Not familiar with the software used for the development of app (Android studio)  **User-friendly UI:** Developing a user-friendly app is always a challenging task. With modern technology, there is always newer and better UI, of which we need to have the knowledge. |
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| Motivation and Need: *(Please describe the motivation and need for this work.)*  Teachers may want to know more details about other teachers who were teaching to same class. It has been difficult to search a record from hard copy for every individual teacher’s details.  Enhanced communication and collaboration: since everything is centralized and transparent, communication and collaboration are greatly enhanced. In some instance, as, notifications are deployed to make sure all parties are alerted. With that everyone is virtually in the loop.  There was an urgent need for an automated registration system in Bhutan to eliminate the cumbersome manual work which can be transformed into digitalized way. A portal for Teachers to be alert for particular period maintaining proper time management. |
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# 3. Aim and Objectives of the Project

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| *(Please write the actual aim of your project. Also, describe the measurable objectives of the project and define the expected results. Use results-oriented wording with verbs such as ‘to develop.’, ‘to implement.’, ‘to research.’, ‘to determine. ‘, ‘to identify.’ The objectives should not be statements and should not include explanations and benefits. The objective should actually specify in simple words what the project team intends to achieve (something concrete and measurable/ deliverable). Fill only those objectives that are applicable to the proposed project.)* |
| AIM: To develop School Management System.  OBJECTIVES:   * To launch app in play store. * To develop an online School Management System Android Application. * To help Teachers to get information about other teachers who is teaching same class. * To transformed the manual work into digitalized way. |
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# 4. Methodology

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| Development / Research / Test Methodology: *(Please describe the technical details and justification of your development and research plan and test plan and testing strategies. Identify specialized equipment, facilities and infrastructure which are required for the project and their utilization plan. The block diagrams, system flow charts, high level algorithm details etc. have to be provided in this section. Also, describe the overall methodology to be used for the particular research topic)*  General Methodology:  Problem statement:  Transcripts of teachers are prepared manually by the record officer which is a very hectic work for a normal person. A teacher has to carry hard copy to be aware of timing and also they are to seek help from management about other tutor details like who teach to particular subject and to particular class. In order to get all the information, it was which is also a time taking process, wasting manpower and much time unnecessarily that does not utilize the current technology. |
| **Literature Review/ Problem Gathering**- Literature Review is done to get the help and clear concept about the project. We have gone through some related app or websites that is related to Project topic. We have collected the drawbacks faced by the current system (school management).  **Requirement Gathering** – Collecting all the required information regarding the development of App through Survey, brainstorming with project guide and collecting information from the internet we will design the user-interface design, Database design and finally the system design.  **Designing and Development –** Designing of the app from the information collected from the requirement gathering and analysis and codebase to develop the app.  **Testing phase –** Once app is developed, it need to be tested for every development of features for the bugs and errors.  **Documentation –** The final phase is for documenting all the necessary things that are being done in the process of the development of the app. Documentation is necessary for the sole purpose of educating third parties and the users.  **Agile Model**  Agile methodology is a collection of innovative, user-centered approaches to system development. It tries to define an overall system plan quickly, develop and release software quickly, and then continuously revise the software to add additional features. Where Agile method breaks task into smaller iteration or parts. It isn’t a set of tools or a single methodology, but a philosophy of people who had realized that in software development it’s pretty hard to predict   1. The number of changes and priority changes in software requirements. 2. How much design is needed before construction is used to prove it. 3. The time for analysis, design, construction and testing.   Agile model plans regarding the number of iterations the duration and the scope of each iteration are clearly defined in advance. Agile development methodology is a conceptual framework for undertaking any software engineering project.    Needs of Agile Model   * Customer satisfaction * Continuous delivery of useful software. * People and interactions are emphasized rather than process and tools. * Customers, developers and testers constantly interact with each other. * Working software is delivered frequently. * Risk is reduced. |

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| Project Team: | |
| ***Title / Position*** | ***Number*** |
| Project Internal Guide |  |
| Project External Guide |  |
| Student Team Members |  |
| Others (please specify) |  |
| Add more rows if required |  |

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| Project Activities: *(Please list and describe the main project activities, including those associated with the transfer of the research results to customers/beneficiaries. The timing and duration of research activities are to be shown in the Gantt chart in Section 8.)*   1. Installation of required software for development process:  * Android Studio  1. Feasibility study: Survey will be done in Google form for teacher and parents separately to check the feasibility for the project. 2. Software Design: in this phase it includes designing user interface, database design and familiarizing the functionalities that will be added while developing the app. 3. Coding and development of app: In this phase designing is done from the information obtained from the requirement gathering and requirement specification and at the same time developing the app by keeping the design concept in mind 4. Testing: in this phase once the app has been developed, it needs to be tested for identifying any bugs and errors. 5. Documentation: Documenting all the necessary things that are being done in the process of the developing of the app. Documentation is necessary for the sole purpose of educating third parties and users. |
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| Key Milestones and Deliverables: *(Please list and describe the principal milestones and associated deliverables of the project. A key milestone is reached when a significant phase in the project is concluded, e.g. selection and simulation of algorithms, completion of architectural design and design documents, commissioning of equipment, completion of test, etc.) The timing of milestones is also to be shown in the Gantt chart in Section 8.* | | | |
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| *No.* | *Elapsed time from start (in months) of the project* | *Milestone* | *Deliverables* |
| 1. | 09/02/2021 to  17/02/2021 | *Confirmation of topic* | Finding topics |
| 2. | 18/02/2021 to 05/03/2021 | Literature Review | Getting idea related to our topic. |
| 3. | 06/03/2021 to  16/03/2021 | Proposal Preparation and submission. | Gathering information of the project for the proposal |
| 4. | 17/03/2021 to  02/05/2021 | Coding | Implementing of functional features and source code |
| 5. | 3/05/2021 to 9/05/2021 | Testing | Test the app for any bugs and errors. |
| 13. | 10/05/2021 | Final review | Submission of final work |
| 14. | 11/05/2021  20/05/2021 | Final Documentation | All the works will be documented. |
| (Please add more rows if required.) | | | |

# 5. Benefits of the Project (Expected output/outcomes):

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| The outcomes of the project would be fully functional School Management System with the following features:   1. Facilitate timetable 2. Allow teachers and education system to view teachers’ details and timetable. |
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# 6. Risk Analysis/Feasibility

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| Risks of the Project: (Please describe the factors that may cause delays in, or prevent implementation of, the project as proposed above; estimate the degree of risk.)  (Please mark ☑ where applicable) Low Medium High  Technical risk ☑  Timing risk ☑  Budget risk ☑ |
| A1. Comments (Describe the risk):Technical risk: As the development of the app begins, the lack of knowledge may become a hinder in the development.Timing risk: The risk of whether the project will be completed on time or not will be also another risk as the development begins.Budget risk: Since the project does not require any financial need, the risk of budget is not concern. |
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# 7. Project Approval Certificate

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| *(Approval of Project Proposal by the Competent Authority (Department Chairman) and Project Review Team is mandatory before the start of project execution****.****)*  ***Project Review Team:***  Sl # Name Signature  (Please add more rows if required.)  ***Project Coordinator***  Name:  Designation:  Email:  Date: Signature:  ***Competent Authority – Head of Department***  Name:  Designation:  Email:  Date: Signature  & stamp: |

# Future Work

* To includes more features based on user’s feedback.
* To includes all the working of the School Management System

**Grant chart**

09/02/2021 to

17/02/2021

10/02/2021 to

05/03/2021

06/03/2021 to

16/03/2021

17/03/2021 to

02/05/2021

03/05/2021 to

09/05/2021

10/05/2021

11/05/2021 to

20/05/2021

# 8. Reviewers Panel Comment

# 13. Report Writing Guidelines

*(Project report will be written under the specified guidelines.)*

# Bibliography

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| SHI, J., SHI, J., TANG, X. Y., ZHANG, Y. J., & YANG, L. L. (2012). Design and Implementation of Document Management System. *Development & Innovation of Machinery & Electrical Products*, 03.   |  | | --- | |  | | Paulk, M. C. (2002). Agile methodologies and process discipline.   |  | | --- | |  | | Demir, K. (2006). School Management Information Systems in Primary Schools. *Online Submission*, *5*(2).   |  | | --- | |  | | binti Hassan, H., binti Rahmatullah, B., & bin Mohamad Nordin, N. (2014). Towards School Management System (SMS) Success in Teacher’s Perception. *Malaysian Online Journal of Educational Technology*, *2*(4), 50-60. | |  |  | | |  |  | | |  |  | |
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