2017 Abstract Booklet

Lamachaur, Pokhara

January 24, 2018

Foreword

It gives me great pleasure to introduce this Abstract Booklet, a synopsis of the culmination of work by Bachelor of Software Engineering students' thesis of Gandaki College of Engineering and Science(GCES) Batch 2001-2013.

With the rise of open access concept in academic circle, this is our humble contribution in disseminating what has stayed within our library premises. Rather than sit in shelves, I think the ideas/theses that has been encapsulated in this booklet will act as a point of extension for upcoming students looking to work on top of what has already been done. This inherent spirit of openness in the academic circle, I hope, will benefit all concerned institutions & individuals.

Summing up, I hope that this booklet is also a start of possibility in more openness, interaction, tie-ups and symbiosis among institutions & students which I am sure enriches the academic community.

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Batch of 2001-2010 Abstracts

Adaptive Website

Sanjay C.K.

2008

"Adaptive Website" is a site that automatically or semi-automaticaly improves its organization or presentation by mining visitor access pattern stored in web server log file. This project is a research based project with large domain. Websites can be considered as the store of information on various subjects. The visitor faces navigational problems due to the presence of this huge amount of information to find their required data, thereby consuming valuable time. However, this explores the ways which can faciliate the visitors with required information eliminating the visitor's navigational problem and time consumption. This project can be useful in real-time website where visitors will be truly benefited.

Keywords: Adaptive Web Site, Web Server Access Log File, Data Mining

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An Online Police Diary

Dam Bahadur Paija Dasari Joshua Rahul Panjiyar Umesh Gurung

2011

Online Police Diary is a software system that keeps record of the crime cases, criminals, investigation officers and people who are related to a case in a Database and lets the user of the system to view, retrieve and update useful information from any of the police departments in a country. The proposed system is required to provide an easy user interface through a private Internet connection across a country. Face recognition through Luxand FaceSDK tools (Facial feature recognition solution) will be considered as a research based topic to be included in the proposed system.

Chameleon

Binod Khatri Sambhu Sai Sumit Shrestha Yam Bahadur Gurung

2009

With the advent of internet, online shopping has evolved as a multi-dimensional business that includes features like different product searching, comparison of price, electronic shopping cart, electronic payment, etc. However, it lacks some of the features that are available in traditional shopping mall which is personalized shopping experience namely customer behaviour tracking and personalized page generation. Chameleon - an adaptive shopping mall is the enterprise level distributed shopping system which performs data mining for analyzing customer behavior dynamically to generate an auto customized web pages for the particular customer. This system focuses on different forms of adaptation in electronic catalogs and shopping malls and their demands on user modeling considering different types of user data, the privacy and confidence of the user as well as the need of simple integration and reuse of user

modeling and adaptation components. This system provides solution to existing problems in online shopping systems through the personalized item recommmendation based on the customer behaviour. Adaptability is the core of the system and thus it is an addition to the list of adaptive websites. The following report explains the various aspects of the project including research done, artifacts developed and new findings. This report evaluates various existing techniques used in adaptive websites for shopping purposes and explains the implementation of the best technique with relevant modification. This report also recommends new problem-solving approaches for the modern complex enterprise level online business.

Database Synchronization Through E-mail

Suman Jojiju Ramesh Thapa Rajan Adhikari Amit Kumar Sahani Kewat

2006

Information consistency is a crucial need of the world today. Every organization, which is remotely splintered along with their information, is looking for some methodology as a bridge to connect that information together for consistency. Thus, this system addresses prevailing need of all organizations and the only way of synchronization is through e-mail. While e-mail is certainly a powerful and widely used tool, it is usually not integrated with an application for performing any task other than sending reminders. The application scenario described here, an e-mail based SQL update program, uses a simple data model. However, this solution will apply to any data model that we are working with. It will also eliminate the need for complex n-tier Internet applications and serves as a low-maintenance solution for providing data access. This system has been built mainly for Linux server and runs as a background process. This report presents a technique to upload or mirror the distributed identical database by sending the updating information or SQL queries through e-mail. MYSQL binary log file is used as a source of updating information. Some system configuration is done to handle this log file.

Desktop Video Conferencing

Manita Gurung Nirmala Gurung Shanti Thapa

2009

Video conferencing is the process of using a camera and a microphone to send images and sound across a network in real time. This allows two or more people to communicate and collaborate, to share lessons, to discuss ideas and hear foreign languages from native speakers in their home countries. It is appealing to the educational and buisness sectors. Video conferencing allows users to save time and money on travelling and housing costs by bringing people face-to-face virtually.Business leaders around the world use video-conferencing to keep in touch with important contacts while on the go.

This report is an approach to study various aspects of video-conferencing. Also , this project report provides knowledge of the type of protocols and codes used for the video/voice transmission and how they perform their tasks to accomplish video/voice communication.

Easy Web CMS

Bijay Baniya Sunil Koirala Sushil Sapkota Tilak Shrees Rana

2011

The report describes the overall system "Easy Web CMS" designed and built as a project undertaken by final year Software Engineering students for partial fulfillment of the requirements for the degree of Bachelor of Engineering in Software Engineering. The report presents the detailed view of the system built. This report documents approaches the system development following various aspects of software engineering. Various technologies such as web programming language ASP.NET have been used for the implementation of the system. Apart from these, the report overviews the general systems that are in vogue in present scenario. The project provides a concept for developing an online application. Various important things like encryption, simultaneous login, etc are understood and implemented. Similarly, session variables are used to maintain the state of the web pages.

E-Bidding

Dinesh Bhandari Subash Adhikari Roshan Adhikari

2012

The bidding process is one of the most important phases in an orginization. The major objective of organization is to expand business volume by successful bidding on various projects. For this reason, companies must prepare realistic bid proposals. However, the traditional bidding processs is time consuming and requires a great deal of effort. This proposes a model that enables the companies to reduce the bid proposal preparation time and cost by using e-technology.

So to solve this problem we have proposed the proposal for different orginization of Nepal name "E-Bidding". This will minimize difficulties and prove to be simple, systematic, user-friendly and inexpensive.

E-budgeting

Dipesh Thapa Ganesh Bhattarai Manoj Gautam Pradeep Acharya

2014

"E-budgeting" is the system which calculates the budget allocated to different development areas in an automated way. The main theme of developing this system is to involve the public people for choosing the development sectors of their respective Village Development Committee. The information of the public are stored along with the development areas and criteria with its factors. The public vote the areas to be developed according to their need. The priority matrix is used to sort the development areas according to their priority level which then uses criteria factors and public vote to calculate the priority level of the development areas. The major advantage of this system over the presently available manual system is that a fair decision based on the criteria and computed value of votes. The result of the system is then made transparent as it can be seen by any user through the web.

Electronic Medical Record

Anisha Kumari Bataju Bigyan Thapa Bijay Neupane Ramesh Baral

2011

"Electronic Medical Record (EMR) " is a health related information system of an individual which is created, modified and maintained within a healthcare organization. EMR module helps you to record and retrieve the clinical information of a patient. It provides a central repository for holding the entire medical records of patients. It stores data in an organized and structured manner so that a clinician or any healthcare provider can easily access clinical data based on his role, needs and security rights. This report describes the developing effort that has been put into the development of Electronic Medical Record-keeping system. Handling diversified information related to varied medical issues has become a sensitive task. A medical organization comes across varied categories of patients, diseases and the redundancy of the information. So, we need a system that manage and maintain such sensitive repository of medical information. During our research, We came across many instances of medical software that were developed using reusable components. But since this project was purposed as an academic project, we have avoided the use of such reusable components and effort was made to gain as much hands-on software development knowledge as possible. The develpment endeavor is not as competent as the commercial software in the market but to engender an extensible set of artifacts and module to expand as a high quality commercial Electronc Medical Record-keeping system.

Entrance Result Generator

Manish Gurung Santosh Sharma

2008

In the recent and advanced age of Science and Technology, computerization in every field has become absolute inevitable. There have been scientific changes in the field of Information and Technology. In this technological world, almost all things are related to computer. In these modern days, computerized system is very essential in WRC where result is generated manually. The system mainly focuses on registration of applicant record, register applicant score, view pass list of the applicant, show priority selected by the applicant, and view addmission list of the applicant. The system helps us to generate the admission list on the basis of the selected subject based on the merit basis, quota basis. The system is designed to provide a user friendly interface. The system is implemented using HTML, JavaScript and Hypertext Processing(PHP) for server side scripting and MySQL databases.

E-thrive

Roshan Koirala Samjhana Gautam

2012

This document fully and formally describes the requirements of the proposed project system. The project entitled "E-Thrive" is a web-based application developed using asp.net as front end and SQL as back end. The agenda is designing an online site to allow buyer and seller to help purchase and sell their items online without having to be present physically. The project maintains the detail of every customers payment , product posted for sale, addition of new customers and also update and detection for the same. The application is a database oriented system.

GCES Messenger

Bishal Maskey Nabin Lamichhane

2009

GCES Messenger is an instant LAN messaging software application for immediate text messages and file sharing over a corporate network. This allows two or more people to communicate and collaborate. This Intranet Messenger is an ideal replacement for Internet messengers in school, colleges and other organizations, having private and global messaging and improves internal communications and relationships within the organizations.

GCES Nepali Text To Speech Synthesizer

Bikram Lal Shrestha Sanjeev Ghimire Amit Shrestha

2006

Nepali language being mostly used language in Nepal, a text- to-speech (TTS) synthesizer for this language will prove to be a useful ICT based system to aid those majorities of people in Nepal who are illiterate and also to those who are physically handicapped.

Nepali being phonetically rich language, simple letter-to-sound rules are applied to produce valid pronunciations. The system uses the standard unit selection and concatenative approach for voice production. Here, all the phonemes and diphones in Nepali language are stored in the Speech Database. At runtime, TTS system extracts small units and concatenates appropriate diphones to produce voiced output. Making the synthesized speech sound more smooth and fluent needs digital signal processing, which is the main difficulty in this system. The system can be extended to include more features such as more emotions, improved tokenization, and minimal database.

Gesture Recognition And Processing

Ashok Subedi Hari Prasad Khanal Shankar Dev Adhikari

2012

This research aims to develop an application that will capture various gestures via a web cam and process them to derive their corresponding conclusions. In present time, we have witnessed several innovative advancements on computer technology, but the way we interact with the computer is predominantly keyboard or mouse. We aim to explore the new dimension to interface with computer through gestures. Various intuitive gestures will be captured and processed invoking necessary outcomes. Here a camera will read the movements of the human body and communicate the data to a computer that uses gestures as input to the application. Project will be modularized to expose different gestures applications like gesture draw and gesture animation, among others. Project intends to establish gestures as an effective option of human- computer interaction.

Hairstyle Matching Software

Samira Lamichhane Sangita Gurung Sumita Gurung

2006

Hair Style Matching Project is a complete software solution for matching different hair styles present in the database. It offers the customer the opportunity to try out all the latest hairstyle and cut accordingly. It deals with superimposing with different styles on captured image. No more wondering and fretting; now one can know exactly what you look like when you step out of the different hair catalogue containing styles from award-winning stylists and leading academies. And one can access all the latest hairstyles, as well as the best tips, guides and advices. We have implemented this project using Visual Basic (VB), which provides a Graphical User Interface (GUI) so that novice user can use easily.

Image Crawlee

Anil Adhikari Niranjan Acharya Prajwal Koirala Kshitiz Shrestha

The project 'IMAGE CRAWLEE' is a research-based project aimed to perform research on image search engine and image search crawler as an approach to enhance the prevailing image processing and image search algorithms and techniques. This project focuses on research study of prevailing image search applications like Google search by image, TinEye and undergoes analysis with the major trending tools and algorithms. This project will involve on evaluation of different crawling tools, image ranking concepts, image processing and indexing concepts. This project is an attempt for the users and developers to provide with easy-to-learn environments and development platforms preferred for image search crawler.

Kurakani

Jeevan Gurung Sameer Gurung Sumit Kumar Kashyap Sunil Thapa

2015

"Kurakani" is an online application. The basic purpose of this project is to provide a social networking application which can be used to communicate between people. It is a web application capable of providing instant chat service. Using this application, a user can join chat rooms to chat or have private chat with connected users. There is also a provision for video chat. Thus, this application enhances the communication system by giving a platform for communication with others people.

Meaning To Words Dictionary

Bijay Chandra Koirala Ashish Kumar Gurung Maheshwor G.C.

2012

People of different positions, age groups, and levels of knowledge need to write different articles, journals, speeches, poems etc. throughout different part of their lives. We have different types of dictionaries to perform words to meaning searches but sometimes we get stuck searching for the right word; we might even end up putting the wrong word on the wrong place. To defeat this problem, no such significant steps have been taken so far. Therefore, this research work aims to develop a dictionary in which we could search appropriate word by using some clue to the word. The clue word may be meaning of the words or any word that is related to the targeted word. That is, in ordinary dictionary we go from word to its meaning whereas in the proposed dictionary we can go from meaning to word and word to meaning as well. For meaning to word part of the dictionary, we have used Keyword Based Approach and suggested an alternative approach: Attribute Based Approach.

Nepali OCR

Bishnu Thapa Manoj Adhikari Nishan Hitang

2012

Nepali OCR is software that translates the scanned images of printed Nepali text into machine-encoded text. The input for the software will be image file ipeg, png, bmp, etc.) and the output will be a text file. The basic steps to be followed in our project were image acquisition image binarization, line segmentation, word segmentation, Dika removal, character segmentation and character mapping. However, being our project a research and everything to be done from the scratch, we were unable to complete the final step (Character mapping) of the project. We started from image acquisition, loading the image into our software and converting into certain size. Next step was image binarization where we converted the image into binary image i.e. every pixels in the image were represented as either 1 (black) or 0 (white). The next step was line segmentation where we separated individual lines from the image based on the calculation of number of black pixels in each line. Afer that, we separated each word from the segmented line. Then, we removed Dika from each word. Without the removal of Dika, every word would act a single character. The next step carried out was the segmentation of each character from the words.

Nepali Parser - Chunker

Muna Khadka Ramesh Raj Baral Shakeel Shrestha

2007

Chunker is the system that finds the phrases present in the tagged sentence depending on some POS(Parts Of Speech) rules. This is the part of the Natural Language Processing which is useful to find the syntactical structure of the sentence. The system is domain specific in the sense that it can chunk the simple sentence that are found in the primary level text books. The system can be used by several systems like Grammer Checker, Machine Translator or some other Information retrieval systems. This system is part of Nepali Parser that has been outsourced to Gandaki College Of Engineering and Science by Madan Puraskar Pustakalaya(MPP).

Nepali-TTS

Bikash Bhattarai Prativa Nyaupane Suraj Subedi Suku Kumar Nepali

2011

Nepali-TTS is a computer application that is capable of reading out typed text. Nepali-TTS is such a system primarily developed for Nepali, but with minor modification could directly be modified for any language which is phonetic in nature, i.e. what is written is exactly what is read out. This is different for languages like English, in which what is written is significantly different what is read out, in the sense that the same characters will be pronounced divergently depending on context.

In this system, first of all, user is required to input Unicode into the text box. Then each phoneme of the Unicode is converted into html encoded values together. The encoded values od each phoneme are taken. The selected html encoded values of that phoneme is validated. In validation, the user input phoneme is checked with the database. If the phoneme is in the database then the phoneme is validated otherwise not validated. After that the filtration is done. In filtration, we filter the selected phoneme. These phenomes are stored in the array in such a way that they will relate to their corresponding sound waveforms. These arrays are the playlist of our system. When the user finishes his input, he will have to press the play button and then the speech will be generated.

Project is especially aimed towards visually impaired and illiterate people who cannot easily read the contents of the Web Page.

NewsHunt

Nirmal Koirala Rabindra Gautam Ranjan Adhikari Saroj Subedi

2014

NewsHunt is an application to get the latest news through local post. From breaking news to business, entertainment, technology, regional, the art and sport, all divided into clear section, this application is aimed to provide the prevailing news about every report. NewsHunt is a social networking service mobile application where registered community members can submit content, such as text post or direct links. This project focuses mainly on probability and feasibility feature through which people can make better utilization of time.

Online Criminal Record Management System

Radhika Bista Narayan Koirala

2007

In the present context of increasing crime rate in Nepal , the Online Criminal Record Management System can play vital role in the development of country by strengthing the security infromation system. The system keeps record of all the information related to the police and criminals kand actions taken by them in managed order in the centralized database. The traced information are made avialable via the web to all the public and police personals according to different level of access. The system helps to generate individual police report. Visitors of the site can also post comments and recommendations.

The system is a web based system implemented using HTML, Javascript and Hypertext Pre-Processing (PHP) for server side scripting and MYSQL database server.

Pancheebajaa.com

Bijen Hirachen Dil Bahadur Thapa Sandip Adhikari

2012

This project intends to develop a matrimonial website named "pancheebajaa.com" to bring together potential matrimonial partners on the net. "Panchebaja.com" is a web-application which is aimed to work as "lami" to those parties who are willing to find their soul mates through internet. The final output could make the interaction between the bride and groom and the final conclusion of this applcation is marriage ceremony between the two unknown people frm the help of this web application. People may be able to find their life partner of distinct religion, nationality and qualification through internet.

Parallel Processing and Distributed Computing

Prashanta Poudel Uttam Bhandarai Jenish Sthapit

2007

Parallel Processing and Distributed Computing is a framework for solving computationally intense problems. The system is intented to be used especially in a local network. A problem is broken down into independent parts and assigned to various computers in the network thereby utilizing unutilized processing power in the network.

Parallel Processing and Distributed Computing is developed under JAVA, JAVA RMI using higher - level sockets. Parallel Processing and Distributed Computing is a scalable, platform independent and highly secure system.

This system is best suited for certain physical and mathematical problems that can be partitioned into smaller independent tasks. For demonstration, this system is limited for calculating accurate value of pi by different methods, merge sorting, and prime number generation. This framework can be extended to more features and bigger domain of problems.

The major challenges include partitioning of the problem, communication between nodes, synchronizing intermediate results, data dependency between various partions and load balancing.

Pathshala (E-Learning)

Andrew Gurung Jeevan Timilsina

2009

Pathshala, E-Learning System, is a technology used to support Remote - learning. The Pathsala platform is developed to the level where all kinds of multimedia exchange mechanism are successfully used in order to stimulate convetional classroom. Available to the students and teachers are the set of tools, which help convey both synchronous and asybchronous lectures. These tools include video / audio conferencing, shared drawing and text spaces, web services and even simple websites that carry educational content. A web-enabled teaching and learning platform, Pathshala is designed with great flexibility to operate in different network environments for various types of users. Equipped with powerful capabilities for managing content to meet instructor and students needs, core features include registration, synchronous and asynchronous delivery of courses, desktop sharing, online chat and audio/video conferencing.

Promoting Business in Nepal

Eliza Gautam Prashamsha Devkota Laxman Gurung Sushil Gautam

2015

"Promoting Business in Nepal" is designed specifically to help organizations to promote their marketing process. Till now there are many methods of marketing typical traditional marketing research uses tatics such as survyes, via techinques like mailing quesrionnaires to customers and conductiong focus groups. Facing rapid social, technological, and economic change, the traditional marketing research industry will either adopt new tools and talent, repositioning istelf in a more strategic, consultative space, or it will fall into decline. So to handle such tasks data analysis technique is being used these days. We use data analysis technique to promote marketing in big orgamization. Data analysis technique is a process of inspecting, cleaning, transforming and modeling raw data into a processed data which will support in decision making. We are going to develop a web based application so it will simple and easy to use. Though our application is not quite useful to normal people but in case of big organizations, they may find it very useful.

Ramailokurakani.com

Anil Bhattari Bhim Prasad Ale Pradeep Gautam

2012

This project work intends to develops a social network web application that could reunite with the long-lost friends who are out of our reach. It can spread awareness about the present cause in the society through community bases program. It also reunited with family members who are far from them. We can get chance to know a celebrity closely through these application. It allows the users to make friends, send messages, post articles, give comments, post photos, and chat with friends. It also allows users to create a profile page for their own and manage friends, photos and comments themselves. Not but the least we can do something new and miracle.

Ramrodeal

Aashish Gurung Sadip Acharya Suyog Rajbhandari

2014

In recent years, the advent of electronic commerce has led to the creation of many new and interesting business models for Internet-based selling. In this paper, we will explore a variant of the typical dynamic pricing mechanism, in which buyers and sellers actively engage in the price discovery process, that emphasizes the power of group buying. A group-buying discounts a dynamic pricising mechanism that mimics the general approach of traditional "discount shopping clubs". Group buying pricing mechanisms permit buyers to aggregate their purchasing power and obtain lower prices than they otherwise would be able to get individually.

"RamroDeal" is a web-based as well as android based buying group buying application that primarily lets customers to buy deals and merchants to offer deals with respect to the categories provied. This application can be taken as a remedy to buying stuffs that is expensive if bought individuallyn. Creating an interactive thread buying in cheaper with the help of other unknown people is the basic approach for this application.

The major outcome of this application is expected to be the creation of an ease in buying cheaply going as a group as well as development of an appropriate environment to let merchants sell their stuffs.

Sanjaal

Ajit Kunwar Deepak Singh Thapa Mahesh Gurung Sujan Tamrakar

2009

"Sanjaal" is a networking site for college using Web 2.0 Technology where students and teachers can interact with each other through various features. It can be used within a college premises having Local Area Network connection and thus, avoiding the need of Internet in order to communicate. It is a web based site and provides features like email, instant messaging services and many more. It encourages users to communicate in an effective way and share information among the users. Users can make friend requests, add friends and send messages , post articles, give comments, share photos, get event information related with college, form a group on their own, and even send SMS worldwide . It allows users to create a profile page for their own and manage friends, photos , articles themselves.

Sustainable Agriculture

Gaurab Subedi Nisha Pariyar Ram Chandra Poudel Rishi Saran Khanal

2014

"SUSTAINABLE AGRICULTURE" is a web based application that is aimed to facilate farmers, distrubutors, researchers, policy-makers and several other parties concerned to Agriculture in decission making. This application is chiefly targeted to help those who produce crops (i.e. farmers or farme's groups) in a way that thet can analyze on their own what crop to grow in future looking at the use friendly analysis graphs of Demand and Supply are depicted by the application. The distrubutors or the dealer's party can also take advantage from this application in finding what crop is producd in which region or location. An authorised dealer can book any item shown in the Google Map as per his need through this application. The project maintains the details of demand and supply of agro-goods and creates the visualizatiojn of data that support decission process. This application uses PHP,Html,CSS,AJAX,WAMP Server and JSON for iots development. The major idea of this application is to analyze data available or data provided by farmers groups amd present analysis graphically that are unproblematic to understand so that they can compose some plans for future and support both the parties (i.e. farmers' groups and dealers)in conducting deals with ease.

Semantic Analysis And Parse Tree Generator

Mina Thapa Mohan K.C. Sandhya Koirala

2007

Parse Tree Generator take tagged chunks as input and generates visual representation of parse tree. Parse tree represent the syntactic structure of the sentence which depicts clear vision of phrases. Semantic aralysis explores the relations between words in a sentence according to grammatical rule. These relation are useful to interpret the meaning of a sentence This sysiem atempts to identify the relations between chunks in a sentences like Nepali Pronouns. Parse tree drawn from semantic analysis are more accurate than parse tree drawn from syntactic analysis. So this system can be used in Grammar Checker, Machine Translation system and some Information Retrieval system The project is domain specific It includes the prose from primary school level. This system is a part of Nepali Parser that has been outsourced to Gandaki College of Engineering and Sciences by Madan Puraskar Pustakalya.

TV Show Buzz

Ashok Thapa Bil Bahadur Gurung Biswajit Nepali Kedar Adhikari

2014

TV Show Buzz is and android based application that primarily lets users view the schedule of television in their smart phones and get better in smart phone devices. This application is useful to people of all the ages and avoid missing TV programs they are waiting. It lets users know the TV schedule of different channels once they synchronize their database in a day. It uses Android SDK, Java Programming Language, XML, and WAMP server for remote database and JSON (JavaScript Object Notation) for the transmission of data between server and Application as the major out come of this application is that the users don't dave to stick to TV to view the schedule rather they can get information in their mobile and manage their time accordingly.

University Registration System

Aashis Binod Khanal Binod Shrestha Nikita Pradhan Vikal Acharya

2007

University Registration System is developed to assist the intensive management task of Pokhara University. The system mainly focuses on registration and updating of faculty, program, course, exam, college, and student. It also helps in generation of Registration Number, Registration Card and Entrance Card and Scheduling examination and record keeping for student result. The system is designed to provide a user friendly interface and attempts to reduce error by minimizing data entry.

The system is implemented using HTML and JAVAScript and Hypertext Pre-Processing (PHP) for server side scripting and MySQL as back end. The system is intended to be used by academic and examination section within the same local area network.

The major challenges include analyzing data for the routine generation.

Video Conferencing in LAN

Amrit Dahal Chandra Karki Sujan Adhikari

2012

This research work intends to develop an application that enables to perform video conferencing in LAN. Video conferencing has become one of the necessities to carry out communication and daily activities in real time manner bridging geographical gaps and reducing travel related costs. The main aim of this paper is to develop video conferencing in LAN to promote organizational activities in an economic manner. For this, camera is used to capture the video stream and microphone to capture the audio signals and RTP protocol for transmitting the audio and video over LAN.

Voice Over Internet Protocol

Binod Shrestha Ghanashyam Subedi Mahadev Adhikari Roshan Gurung

2009

Voice over Internet Protocol is technology that makes it possible to make a phone call using an Internet connection or a dedicated network that uses the IP protocol, rather than go through the normal telephone line.VoIP offers cheaper call prices with less quality of service than Public Switch Telephone Network(PSTN). VoIP is the use of Internet Protocol(IP), for real-time voice traffic. This project explores the possibility of using VoIP instead of PSTN. This report is an approach to study various business aspects of VoIP in contrast to PSTN, analysing the various business aspects and technical aspects for real time voice communication.This project report provides the knowledge of type of protocols and codes used for voice transmission over Internet Protocol and how they perform their tasks to accomplish communication. This project report focuses on using VoIP on Lan or Intranet. For the protocol we have used User Datagram Protocol which focuses on performance rather than security and data integrity. This project can be easily used in any organizations usind LANs to communicate with organization members without using Internet Connection. This project will save an organization a lot of time and money used for communication.

Customer Relationship Management

Bimal Parajuli Ram Bahadur Pun Vijay Kumar Rana Zohvin Singh Basnyat

2011

Polygon CRM software is based on management of customers and employees in an organization. It involves using technology to organize, automate and synchronize sales, marketing, customer service and technical support. Polygon CRM allows organization to manage business relationships, data and information associated with them all in one place as a command center.

E-Ads

Pralhad Kumar Shrestha Rohan Shrestha Rohit Khadgi Shubham Agrawal

2015

"E-Ads" is an internet-marketing or online marketing that helps in indirect increment in people's business along with increment in commerce. It helps the publishers that are not getting the platforms to earn some amount of money. We act as a bridge between Advertiser and Publisher to show the desired advertisements on targeted users. Advertisers can easily keep track of the advertisements viewed by the users and popularity worldwide.

English to Nepali Machine Translation System

Sashi Gurung Shanti Gautam

2006

English to Nepali Machine Translation System is a translator that converts English sentences into corresponding Nepali sentences. The system is domain specific (children story translation). The Machine translation system consists of Morphological Analyzer, Part of Speech Tagger, Nepali Mapper, Nepali Generator, Dictionary and Transfer rules. The English Morphological Analyzer identifies root word and its type according to appropriate part of speech. Based on the root word, the word is mapped to corresponding Nepali word which is in Romanized form. Then, after applying transfer rules following Nepali Grammar, the corresponding Nepali sentence is generated.

The English Morphological Analyzer Tagging are done with Freeling, an open-source tool. The output of Freeling is input to Nepali Generator. It contains several transfer rules following Nepali Grammar rules. Lastly, the engine produces Romanized Nepali sentence. The engine can be run from command line or simple user interface can be created to use the engine.

Mato

Bibek Thapa Binay Subedi Bipin Aryal Naresh GC

2015

Nepal is predominantly an agricultural country and agriculture is the foundation for sustainable economic development and the major source of income for the people. Soil analysis, plantation, weeding and harvesting time for the crops, land to fertilizer ratio are the most important factors for farming. MATO is an effort for providing these information in the form of web application as Nepalese farmers are still dependent on traditional and manual practices for farming.

MATO is a web based software application developed using PHP and MySQL Server. MATO is primarily focused on suggesting the best crops to the users based on the pH value of their soil without having to consult with agricultural experts. MATO facilitates users by providing the information about the types and amount of fertilizers to be used in order to increase the productivity of the soil. MATO suggests the suitable time period for planting, weeding and harvesting the crops based on weather analysis of the corresponding region. MATO also includes charts and graphs associated with production of various crops which help farmers to select the trending crops that have better economic vlaues. MATO enables farmers to get all these facilities from any place just by accesing into the internet and farmers do not require the experts for solving their agriculture related queries.

Online Auction and Shopping System

Sagun Shrestha

2008

The purpose of the project is to provide virtual market place and to support web-based trade. It is an auction-based and shopping-based site that serves as a platform for buying and selling products and services via internet. The system is implemented using HTML, Javascript and Hypertext-Preprocessing(PHP) for Server-side scripting and MySQL as backend. Professional approach to system analysis and design has been followed using aspects of OOAD. The system is intended to be used by general users for e-commerce over a wide area network.

Online Food Ordering System

Ashish Banstola Sanchay Gurung Sunil Gurung

2014

The project "Online Food Ordering System" is web-based system. With this Application, we are able to see the different restaurants in the Map. It also shows the location of the restaurants in the map. Customer can see the menu of different restaurant with their price. Only that customer/organization who is registered in the system can order the food from the restaurant. Restaurant will receive the ordered item and name of the customer when the order is taken by the customer. This type of application will be very useful if we have less time. This project uses HTML, CSS, Javascript, PHP and WAMP Server for its development.

Search Engine

Aashish Prakash Shrestha Anju Thapa Bidur Devkota Meena Shrestha

2006

The report describes the development effort that has been put into the development of a search engine. Searching for something in a huge information repository like the Internet can be compared to trying to drink water from a firehose. Such a wealth of information is available that most people are unable to handle it and they get lost in the vast ocean of information. So, we need a system that guides people to finding the information that they desire. A search engine is a program designed to assist in finding information stored on a computer system such as the World Wide Web, inside a corporate or proprietary network or a personal computer. The search engine allows one to ask for content meeting specific criteria (typically those containing a given word or phase) and retrieves a list of references that match those criteria. Research was conducted to understand how a typical search engine operates; its underlying technologies. The working of major commercial search engines like Google and Yahoo was investigated. During our research, we came across many instances of search engines that were developed using reusable components like an

off-the-shelf spider or an off-the-shelf indexing technology. The use of off-the-shelf reusable components was avoided because this being an academic project, effort was made to gain as much hands-on software developement knowledge as possible. The development endeavor is not as complete and efficient as commericial search engines but to engender an extensible set of artifacts and module to expand as a high quality commercial search engine.

SMS Application

Kiran Koirala Ram Chandra Adhikari

2002

"SMS Application" project is about receiving SMS via PC from mobile, extract requested message, search the keyword on database, retrieve key-information and send the description to the mobile client from PC. The basic hardware components for system establishment are PC, data cable, at least two mobile cells with its phone-line connection services. A server PC interfaced with one mobile set via data-cable handles SMS message from any mobile client. Presently, different private companies are trying to implement this technology in their services and they are used to buy those applications from foreign which had seen to be more expensive. Moreover, the introduction of SMS Application has boosted the life style of people. It is undeniably the smartest information basket existing. Without it, we would have to rely on other expensive means to gather information.

Touch Sense Live Paper Keyboard

Dilip Kumar Shrestha Sovit Thapa Umesh Bastola

2008

This research work intends to develop such an application that could enable users to type on any applications on foreground using a simple paper. Touch Sense Live Paper Keyboard is a system that generates the keystrokes directly from a plain paper with characters drawn in it. The effect of keystrokes is seen on the application in focus. This system takes the help of camera in order to capture position of finger and keyboard (layout). OCR is used to recognize letters in the paper and touch is sensed by the TouchSensor component. At the articulation point of these three components, system will send a corresponding key to foreground application.

Opinion Mining Through Social Media

Amir Bhujel Bikram Adhikari Hem Sharma Acharya

2010

"Opinion Mining Through Social Media" is a software system which facilitates its users to get the opinion on any matter of interest. This system rates the queried keyword so as to distinguish it as a good or a bad one. The input to the system is the word or group of words from the users. The system then extracts all the words from social media like twitter. All the collected words are lemmatized in order to singularize all the extracted words and then kept in the bag of words. The words are then compared with a trained library to give the sentimental analysis of the words. Each word is given a certain value as rating which is the output of the system This process of semantic analysis can be proved to be highly beneficial since it will help a lot in making a proper decision on any product or about a person. Decisive works will be much easier and faster as this system will solve the problem of information overloading, spamming and product monitoring.

Online Shopping

Bishan Gurung Santosh Bhandari

2002

The project provides a concept for developing an online application. Important features like shopping cart, modes of payment and simultaneous login are understood and implemented. This report approaches the system development following the various aspects of software engineering along with use of various web based technologies. It overviews the general systems that are implemented in present scenario. Similarly, sesssion variables are used to maintain the state of the web pages.

Linux Magistrate

Durga Prasad Poudel Krishna Poudel Sanjay Bastola

2010

The aim of these project "Linux Magistrate" was to develop an administrative tool for Linux Server with user friendly web-based GUI. The aim was to develop tools to monitor the services of Linus Server as per the requirements of users and environment of system in the organization like offices, colleges and so on. The basic services like system information, disks information, managing user accounts, process monitoring, and so on, are supposed to be included in our project. Besides, other services include the advanced features like DNS configuration, DHCP configuration, Internet Usage Monitoring, Internet Access Control, configuring firewall and so on.

Linux Magistrate provides an easy way to monitor the activities in the Linux Server remotely that is very useful for the Linux System Administrators. The elegant

web-based GUI interface helps to perform the administrative tasks with more ease compared to that of use of terminal.

The system starts with the welcome page prompting the user to establish his aunthentication. Then, the user is guided to the administrative page where monitoring, controlling and editing of the services is done.

Epidemic Surveillance using Twitter

Avinash Adhikari Madan Khadka Samip Ghimire Siddhant Aryal

2011

Rapid response to a health epidemic is critical to reduce loss of life. Existing methods mostly rely on expensive surveys of hospitals across the country, typically with lag times of one to two weeks for influenza reporting and even longer for less common diseases. Here we devised a method for disease surveillance that uses microblogging site Twitter.com. In this project, we studied a particular problem: how to extract influenza outbreak information from Twitter. We devised a method by integrating 'Naive Bayes' with the 'bag-of-words' scheme to overcome the problem. This project helps to find the outbreak of the epidemic occurrence during its early phase.

IP Telephony

Lalit Ashok Gurung Manzil Gurung Radhika Acharya

2004

IP Telephony means placing telephony calls over IP networks instead of public switched telephone netwoks (PSTN). IP Telephony offers cheaper call prices with less quality of service than PSTN. IP Telephony is the use of the Internet Protocol (IP), for real-time voice traffic. This project explores the possibility of using IP Telephony instead of PSTN. This report is an approach to study various aspects of IP Telephony in contrast to PSTN, analyzing the various business aspects and technical aspects for real time voice communication. Also, this project report provides the knowledge of type of protocols and codes used for voice transmission over IP and how they perform their tasks to accomplish voice communication.

Virtual Super-Computing Over Internet

Amit Batajoo Nabaraj Adhikari Naresh Adhikari Prem Regmi Rajan Bastola

2007

"Virtual Super-Computing Over Internet " is a model for distributing the chunks of a large problem that would require the computation power comparable to the supercomputers to the voluntarily donated processing power of numbers of computers connected through the internet and have them solve the problems independently and send the result to the master computer.

This model of computing consists of a Job Dispatcher in master computer. The Job Dispatcher assigns a separate job tasks to the different computer that comes to receive job. The Job Requester is called Slave. Each of these slaves receives the job to execute and transfer the result to the master computer. Finally, the master computer combines the result obtained from different slaves. It results the possibility of success in building the virtual super computer using normal computer over internet. Virtual Super Computing Over Internet is based on the high level Java sockets, Java RMI and the http protocol. For implementation we have chosen a problem of finding the prime numbers from some lower limit to some of the higher orders of 10.

The major issues that should be handled are partitioning of the problem, authentication and authorization, dispatching the job, synchronization, error handling, load balancing and communication between nodes.

SnowRacer - An extension to Tux Racer

Indu Gurung Radha Gurung Kalpana Prajapati

2014

The project explores the possibility of choosing the options in the game - Tux Racer. Options here mean choosing course, choosing a playable character throughout the game. Tux Racer is a 3D computer game starring the Linux mascot, Tux the penguin. In the game, the player controls Tux as he slides down a course of snow and ice collecting herring. This game is growing its popularity as it has interactive interface, easay to play and understand, fun for all people who prefer peaceful sporting challenges rather than bloody alien massacres. Unlike many other computer games, there are no options for choosing the playable character.

This is an exploration project. The game is based on opensource development model. The benefit of using opensource is that the cods can be redistributed or modified under the terms of GNU (General Public License). The organization of codes are in modular fashion. So, here we present a roadmap to adding a new Tux. On the course, we added a new course named as "RIK" in the game.

Batch of 2011 Abstracts

Beauty Product Recommendation System

Bidur Subedi Bibek KC Mahesh Bahadur Thapa Niranjan Udas

Beauty sections of departmental stores are filled with a variety of products of various brands that promises a lot of beauty enhancements. People looking for suitable product to use often get intimidated by the number of choices they have. In order to help in that scenario, the beauty product recommendation system recommends products based on user's beauty profile and preferences. It also takes into account the preference of users with similar beauty profile. The recommendation system is currently limited to Moisturizers.

Budget Visualization and Analysis Tool

Prabesh Shrestha Sushil Ale Sushil GC

In recent years data has become a crucial thing. In Business it is the most important thing and interpreting it to dig insight is always important. Budget of any organization is important and provide insight of the organization. This project aims to provide convenient tool for organization to interpret their activities regrading budget. It provide convenience in visualizing their budget (income and expense) and project future budget (income and expense).

Our objectives is to provide tool that helps organization to visualize and analyze budget in convenient way.

Developing application in business intelligence domain is very complex. Visualization of data is very important to easily interpret information that adds value to the organization. This project is developed as a prototype on visualization of budget and provide projection of income and expenses of the organization. Though the project needs to visualize budget of any organization, we have tried to reduce the complexity on interpreting data and worked on a particular organization.

Chase Me

Drishya Thapa Sukmit Thapa Joshila Joshi

The purpose of our project was to build an online,real-time,multiplayer tag game.First we searched on app stores for two different types of games:online multiplayer games and tag games.We found that most popular tag games had multiplayer feature but not across the network(online).On the other hand,there were tons of other online multiplayer games with more advanced features.So we decided to merge these two things in our own way.Then our next aim was to find the appropriate platform to build our game and our search ended with the result "Unity 3D,a popular game development platform".As the next important thing in our project was "across the network(online)",so we began searching on the internet about how we can implement networking on Unity 3D in an efficient way.We came across many different solutions and among them we chose "Photon Engine, a multiplayer game

networking engine".In this paper we present how we built our game using Unity 3D and Photon Engine.

1.To let the user join from Facebook or as a guest.

2.To provide the user with coins.

3.To let the user play the game with:-

3.1.anyone who is online(other players who are currrently available for the game):-

-take entry fees(coins) and reward the winner with more coins.

3.2.with his/her own friends:- -do not take entry fees(coins) but reward the winner with coins so that they can earn free coins.

4.To let the user choose the character.

5.To let the user decide where they want to play depending upon the maximum number of players that can play there:- -two players(per game) with game time 60 seconds. -three players(per game) with game time 90 seconds. -four players(per game) with game time 120 seconds.

6.In the game,to let the player control his/her character which will have his/her name above it.

7.To let the user play the actual game:- -to randomly select a chaser among the players at the start of the game. -to display game timer for all players. -to provide "chaser stopwatch" to each players which keeps track of the time period where that player has been the chaser. -to detect chaser collision i.e.detect if the chaser has collided with any of the chasee.If so,make that chasee the new chaser. -when the game time ends,to sort the timestamps which is on the "chaser stopwatch" of all players and make the player with least timestamp, the winner.

8.To handle "internet disconnect" and players leaving in the middle of the game.

In a nutshell,"Chase Me" is a tag game that can be played at real-time with multiple players across the internet which is built using Unity 3D.

Driving License Management

Laxmi Gurung Shrijana Thapa Chettri Sulochana Bhujel

A person may not know the date of written exams or trials to acquire driving license. He/She can fill up the form online by viewing the information that will be provided. The criteria of the forms that will be accepted is also not certain. Even online payment is not possible. So our project, Driving License Management will not only provide information about transportation and driving license but also solves the problem of lack of information, manual way of filling up the form and ways to payment in a systematic way.

- To provide information online.

- To enable user to fill up the form online for acquiring driving license via online payment.

- To display the information related to exams and inform the user about the further process via email and message.

- To enable users to view result of the exam given to acquire driving license.

Driving License Management can be helpful for managing the way of acquiring license. It may be systematic and effective for users.

E-Commerce

Sujan Thapa Achyut Dhewajoo Subash Thapa

This project focus on E-activities that involves buying and selling of various goods.

-To provide user friendly environment and interface for both admin and users.

-To provide add to cart features to user who want to buy product from this site.

-To let admin manage the control process of this site.

-To add online payment system(Future Update).

As our site deals with buying and selling of goods over internet , it will provide easy access to user in searching various products that is being uploaded by admin and adding them to their respective cart to order them later.So it will help the future customers who want to shop online.

"Episode" Recommender

Sudip Dawadi Suyog K.C Saroj Pandey

These days there are too many contents being produced for the TV audience stream-able online as well as airing on the TV. It is really difficult to choose from a myriad of options in what little time a viewer has to enjoy the art of TV. "Episode" Recommend-er is designed with the sole intention of helping such TV content consumer to find a suitable match for their taste. Our application recommends users to watch certain shows based on the user's interests and behavior. A sample survey will be used for reference to determine the viewing behavior its implications and the suitable recommendation algorithm for the application.

The major objectives of our project are as follows: To perform a survey on the TV viewing habits of a sample population and determine an appropriate algorithm for recommendation based on its results. To help TV viewers filter and select suitable contents based on their personal interests To build an application that recommends viewers contents based on their previous watch patterns To provide viewers with a breakdown of their TV viewing habit so that they can modify their behaviors as they deem reasonable

Episode recommend-er application will fill in the void that the TV audience have long felt due to choice paralysis, that occurs due to heavy production of TV content. It will help the audience select best TV shows to watch that will add meaning to their TV viewing behavior and at the same time provide objective assessment of the time they spend watching TV shows.

Expose Nepal

Bijay Poudel Binod Gurung Samman Gurung Santosh Gurung

Expose Nepal is a Web and android based application that brings various news and events together from around the country.The data recorded from such events are then used to generate reports.

-To let any individual upload news regarding disaster , accidents and Events.

-To make user friendly interface for ease of accessing.

-To deliver short and important news in a flash.

Expose Nepal aims to deliver news around the country that people want to hear, read or see.It will be integrated with news filtration system that will let any users to see desire news at any preferable time.

Historic Nepal

Ghan Bahadur Thapa Mukesh Bhattarai Safal Adhikari

Nepal is famous for its natural beauty in the world. The Mount Everest which lies as the cap on the head of Nepalese has its own importance and its own factors of tourism. The natural scenario of the Himalayan beauty is the most lovely place for visit by the tourists. The internal tourists and external tourists whoever wants to discover the beauty is welcome by the nature. The main problem is the available of the information for the tourists to know the places and the events which occurred on the particular time and date . Our project is based on the information flow to the tourists based on the Map view.

- Provide an platform for easy access to the user.

- Provide wiki like platform for access to contribute.

- Give information about those places on map.

- Review the information provided by the users.

- Display nearby places to the users.

Mentor

Mitab Shrestha Bibek Sigdel

This app is android based project to provide the information about movies series and sports. There are various movies and series which are produced at different times and knowing about the release time is important for movies lover. Mentor provides these information about movies,series and sports in single app which can be accessed very easily.

-Mentor provides movies,series information like release date,rating etc to the user.

-Categories movies and series on the basis of latest,now playing,popular,top rated etc and user can access what they want.

-The football section which contains the information about upcoming matches between teams and match chart

-Provides information about different leagues.

-user can pin there movies,series or football matches so app could notify them later

Mentor provided us with wonderful learning experience while working on this project.This project took us through various stages of project development and gave us real insight into the world of software engineering. The joy of working and the thrill involved while tackling the various problem and challenges gave us the feel to develop industry

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Nepali Adsense

B. K. Krishna Magar Milan Adhikari Sushil Timilsina

Nepali AdSense is a system that will assist the trend of marketing and online advertisement focusing on the news portals. This system will interact with the Advertiser and the actual advertisement Publisher which will save time and fetch quality service to both the parties.

1. User (Admin, Advertiser, Publisher) Mgmt.
2. Ad Mgmt.
3. Monitoring Ads (Tracking clicks and impressions)

In Nepal, online advertisement is an emerging but potential sector that carries substantial business value within it. Nepali Adsense eases the phenomenon of this sector by bringing together the advertisers and popular advertising platforms (the online news portals) within a single platform. It assists them to make profits at considerably low span of time and reliable service. Hence, Nepali AdSense is an application to address and automate the online advertisement system via Nepali news portals.

Batch of 2012 Abstracts

Accounting for Inventory and Sales Management System

Ganesh Pandey Nishal Gurung Pratima Sharma

The project Accounting for Inventory and Sales Management System is an extension to our minor project entitled Inventory and Sales Management System that we completed in our third year to fulfill course requirements.

The web based project comprised of an efficient inventory and sales management system for large and small scale bookstores to help update and keep track of the inventory. The accounting feature added to the software will and aid in the transaction of sales and help in measuring, processing and communicating financial information about the organizations economic activities.

i. To implement full accounting features on the system.

ii. To implement notifications and alert features on the system.

iii. To generate detailed and insightful business reports and forecast.

iv. To synchronize the data both on cloud and on a local server.

v. To improve the features of inventory control.

All businesses use accounting information systems. This project helped us develop an appreciation of the role of computerized accounting software in a business environment from the perspective of end users and to understand the concepts of the integrated structure of a computerized accounting system when processing accounting transactions. We gained an understanding of how business transactions work in the real world and how it can be made simpler and easier through the help of technology.

AI Enabled Chatbot

Anjana Sharma Bijaya Parajuli Luzan Baral Nishma Shrestha

This project is a human-computer dialog system for GCES Reception which can replace the work of human-receptionist for basic conversational queries interaction. Replies of this system is based on two different knowledge base, for queries related to student records (billings) it uses database, while for other general queries it uses XML files that contains patterns of questions and answers. The user interface is simplified for the users that they do not have to input complex commands. The system accepts queries made on the standard English language. Raw inputs for chat request are normalized to find the keyword if related to student records, if not then algorithm for pattern matching is used to search replies inside the XML files.

1. To develop a database where all the relevant information about questions, answers, keywords and logs will be stored.

2. To develop a keyword matching algorithm and a string distance comparison algorithm and combine them in order to retrieve the best possible replies.

Two major algorithm were implemented on this project.
Algorithm 1, Keyword filtering which works to find the pre-defined keywords from the knowledge base(database) and
Algorithm 2, Pattern matching works to relate the user input to the patterns present

on knowledge base (XML Files), and generate template outputs. The bot engine is implemented as library so it can be easily implemented in any .NET based application like Web, Desktop and Mobile Application.

Analysis on Recommendation System

Aatish Sai Anup Acharya Deepti Baral Sagar Serchan

On the Internet, where the number of choices is overwhelming, there is need to filter, prioritize and efficiently deliver relevant information in order to alleviate the problem of information overload, which has created a potential problem to many Internet users. Recommender systems solve this problem by searching through large volume of dynamically generated information to provide users with personalized content and services. This paper explores the different characteristics and potentials of different prediction techniques in recommendation systems in order to serve as a compass for research and practice in the field of recommendation systems.

-To analyze the existing recommendation algorithm such as popularity model, content based, collaborative filtering, Singular Value Decomposition (SVD).

- To analyze the learning algorithm using matrix factorization such as Stochastic Gradient Descent (SGD) and Alternating Least Square (ALS).

- To study about usefulness of the afore mentioned algorithms.

- To devise a theoretical approach to get better recommendation.

- To create a simple GUI based recommendation application based on K-mean clustering algorithm (collaborative filtering)

We analysed various algorithms and found out their potential advantage and disadvantage in various situations.

BADS: Detecting APK Malicious Behavior through Static Analysis

Sudeep Acharya Mohan Gautam

Android is the most popular Smart Phone OS, millions of users phone runs on Android. These millions of users install APPs from different source. User may install the APP from untrusted source such as by downloading the APK file directly. All APPs are not made with good intention and may do malicious activities in users device such as sending users sensitive information to them, sending SMS, phone calls without users knowledge and executing harmful instructions on device. These kinds of apps seems like normal APPs but may perform normal things. We built the system where user may be able to test the APK and generate report and according to the report generated they may decide whether to install the APP or not. We perform static analysis on the APK file by decompiling the APK.

- Static Analysis by Decompiling the APK file

- Finding the Malicious Behavior by reading the code snippet

- Determine the safe level of an APK file

Hence we were able to detect the telephony abuse and code execution using the static analysis.

Clinic Aid

Sagar Subedi Santosh Sharma Sailesh Acharya Sudip Dhakal

CLINIC AID is a web based application that is designed to store, process, retrieve, and analyze information concerned with the administrative and record management along with the report generation of individual patients within a clinic or related health center including dental center. It provides a communication link for both patient and clinic along with discussion forum for both of them.

To generate report of the patient arrival on each successive month.

To assist two way communication between patient and clinic owner.

To store patient details along with medical history.

To assist in creation of patient report.

To view the upcoming follow-up list and edit it so as to manage it according to his/her schedule and to notify the patient follow up list.

This project aims at maintaining all the information pertaining to patient, and help them manage in a better and easy way. Aim is to provide transparency in this field, make the process of clinic service hassle free and make the system of medical report management effective.

Farmer Market

Anup Sharma Samit Sherchan Bikky Bhujel Subash Chalise

This project is designed to introduce bigger market for farmers and give farmers power to determine price without any middlemen, so that they can get best monetary return from their crops. It has been designed to help farmer with supply and demand of market, so that they can have the overview of current market. Its goal is also to educate farmer about modern techniques of farming. It will help to create a smooth relation between agricultural producer and consumer directly. The projects vision is to provide farmers with better return from their crop so they can invest and diversify their business.

Program will have these four main objectives :

1) Provide latest information about the modern techniques and information in farming .

2) Provide latest market supply and demand state

3) Provide farmer with bigger market

4) Connect directly between producer and consumer

From our survey we found out that farmers are cheated by the middleman between the shopkeepers and the farmers. So for this type of problem we created this web-based application where users can directly buy goods produced by the farmers or users can post their products. It gives information for reaching and interacting with customer like online marketing.

Farmers in the rural areas are unable to sell their products to whomever they want to sell. So our application makes them easy to sell or buy as well as advertise their products. Our application 'Farmer Market' provides a convenient approach for customers to carry out selling and buying activities related to farming.

Ghar Jagga

Rabin Senchuri Bijay Gurung Abhishek Poudel Chhetri Prameet Bhakta Acharya

Ghar Jagga is a web based application through which a user can perform the activities like buying and selling of land and houses. In this web application, the user can access information and advertise their real estate properties. The admin user can change and update the information regarding the property selling and buying. The main objective of this web application is to provide the user a convenient and flexible procedure to advertise a list of real estate properties online and help them choose a best one to buy from a list of properties.

-To provide a means to the user (seller) to publicize and advertise his/her real estate properties.

-To allow user (buyer) to search o browse particular land or houses from a list of houses and lands.

-To provide an interface so that the use can compare between two different real estate properties.

As you all known that our project is a web based application which can be done by online for selling, buying. From our survey, people were betray by the agent. Agents are also made for earning money by doing good or bad work but many of the agents betrayed their customer by showing others land, possibility of firing by taking money of customer and becoming contactless. So for this type of problem, we created this project for the helpful of people. It means dealing of goods and services through the electronic medium and internet. Our project is also like e-commerce sites doing electronically which makes easier in buying, selling and advertising. It facilitates new type of information based business processes for reaching and interacting with customer like online advertising and marketing, online order taking and online customer service. Objective are fulfilled.

NepaliMade

Bibek Kumar Gupta Paras Bhujhel Saroj G.T. Sijan Shrestha

Nepali made is an E-commerce site for browsing, searching and buying Nepali local goods and materials. This Project aims to promote traditional and modern goods and materials that are produced locally in Nepal. The basic objective of this project is to ease the process of buying and selling local goods through an online portal. The project itself acts as a middle-man by creating a link of business between the local sellers and buyers.

This project is going to be totally built on web using PHP Framework Laravel. The User Interface part will be taken care by CSS framework Bootstrap and a taste of JavaScript will be introduced to make the product more interactive and responsive. This Project is going to be completed by a Group of 4 Members each working on Version Control Platform Git to track each others activity and make everything more productive and effective.

- To build a feature rich e-commerce site for buying Nepali Goods.

- To promote locally made and crafted traditional goods and materials of Nepal.

- Main focus is on enhancing the Tourism sector of Nepal and add some boost to the tourism industry.

- To provide efficient management of users divided into general customers, merchants and Super Admin.

The project aims to promote Nepali products and goods to Nepali consumer Market and Tourism market via Business-to-business ecommerce Model.

Online Patient Portal

Aayush Thapa Biraj Bhandari Bishal Giri Deepak Poudel

The Online Patient Portal is proposed as an innovative solution to the problems of fragmented communication and lack of interoperability among diverse medical record (MR) systems. It provides a single source (the patients PHR) for authentication and remote access of the health information data. It allows a persons health information to be immediately accessed by any approved health provider and would improve the safety and quality of health care, particularly during emergency care. It is a web application developed in the Meteor.js framework making the project reactive which makes the project execution speed faster.

1)Request prescription refills.

2)Schedule non-urgent appointments

3)View our medical records

4)Manage our family's health

5)Have online medical visits

6)Provide patients the ability to view online, download and transmit (via secure e-mail) their health information.

Hence, The system has been developed for the given condition and found working effectively. The developed system is flexible and changes can be made easily. As our main objectives of our project has been covered during our thinking process and coding we came up with many interesting specification that has to be discovered due to time limitations. We believe our product could be valid in today's real challenging world.

Outsourcing Nepal

Mahesh Prasad Josi Rahul Subedi Rajan Lamsal Top Kumar Purja

There are many freelancing platforms and outsourcing companies which provide online outsourcing jobs in the global market each of them with different set of features. But most of them are not easily accessible in Nepal. If some, they also controlled and linked through broker companies due to which the developers who works for those companies are not benefited as per for their hard work. In the context of Nepal, there is no specific platform where normal people can go and learn IT subjects and earn through the knowledge they achieve. So this platform is dedicated to Nepali youth who wants to learn and earn from their own home.

The objective of this project is to provide Nepalese people access to learn and earn. Other objectives are:

Client and contractor registration and verification.

Post a job and hire a contractor.

Apply application and get job.

Easy hiring and working environment.

Learning new subjects from the guidelines of other Nepalese experts.*(OPTIONAL)

Most of Nepalese IT companies are based on outsourcing works. Some of them are doing excellent business. But developers are not being much benefited by those jobs. Outsourcing Nepal is a platform for those developers and other people, who wants to work on their own.

Portfolio Management

Anuj Thapa Aruna Chatkuli Amir Banstola Sagar Koirala

Portfolio Management is a web application that will help users to keep records of their investment. It will help users to track stock of companies listed in Nepal Stock Exchange (NEPSE). Users can enter their investments in any of the companies. The app will help users to track profit or loss made by investing in these companies. The app will crawl Nepal Stock Exchange website to find the current value of stock. This will help to track the profit or loss made by that particular stock.

1. Calculate the profit or loss made by users by comparing buying price, current price.

2. Help users to track their investment.

Hence using this app users will be able to track the profit or losses made by their investment in stock.

Batch of 2013 Abstracts

Ayo Gorkhali

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The AYO GORKHALI is a 3D RPG game that will promote Nepalese History. The story has been adopted from the first battle of the Anglo-Nepalese War of 1814-1816AD (Nalapani War). This war is historically important to Nepalese people because it established the Gurkhas reputation as warriors. To preserve and promote this valor and esteem, this game was developed. The main character is Dorje, a typical Gorkhali soldier born and raised in a poor family who lives by his principles and lives to protect his family and country, whose main mission is to make a way out of the fort for his seventy surviving members of the garrison and safely return back to his family. One of the main focus on our game will be to build and enable AIs in characters so that their communication and attack looks realistic.

a) To complete game mechanics and game logic using some dummy placeholders in the first release.

b) To develop and optimize AI for opponents so that their attack strategy looks realistic.

c) To make the game visually appealing by replacing the placeholders with real assets.

d) To add visual effects and sound effects in the final release.

e) To enable VR and export the game for oculus.

As a part of academic requirement, we developed this game with the theme of Nalapani war fought between Nepali Gurkhas' and British. During the game development time frame, we studied and applied various aspect of game development such as modeling 3D characters, Rigging the characters, Animating the characters, Level design, Sound effects, Visual effects, Game Optimization, Enemy AI development, UI design, Gameplay design, Scripting etc.

Bike Rental System

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The purpose of this system is to develop mobile based application for the people who need to hire bike with the requirements they want. This application takes information from the customer through filling their details. Only registered user will be able to hire a bike and to view or delete their reservation.

To transform the manual process of hiring bike to a computerize system.

To provide complete functionality of listing and booking bike.

To verify the user and provide booking construction.

A fully digitalized "Bike Rental System" has been built which allows admin to add,edit and delete the bike information. It can also allow customer to select and reserve the bike. It allow the registered customer to see and cancel their reservation where as the admin can also cancel their reservation. The feedback system is enabled

here which allow user to send feedback on system and the admin can reply them through sms and email.

Car rush

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Car rush is a multi-player car racing game in which players have to rush in their respective car and try to make the best score. The player with the highest score will be the winner. Unity 3d is used as game development platform and c# as the programming language. Car rush is supported on windows, linux and mac.

To build a multi-platform supported game (mac, windows, linux).

To build our game as a multiplayer game (networking).

To store user information using database and to display scores.

To enable player to experience 3D game with impressive sound effects.

Car race is successfully a multiplayer game and has been built for windows, mac and linux. The players have to race against the time, while collecting the points and the player with maximum points wins the race.

ColzMS

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This project entitled and proposed, ColzMS is about the college management system over the web platform. The project is going to be built purely and only forthe use in web platform. So, basically this is a website that acts as a web application that shall facilitate staffs and students for the college management.

This website shall represent features needed to manage college such as notices, results etc.The website would also represent students-teachers platform like attendance, assignments etc. Individual profile of all members of the college will be made to provide relevant and necessary information, notices and file. It can also feature as a guide for new students and staff to get sufficient details about the college without having to refer anyone on their own.

As all student and staff need some help for tedious task of effectively running college daily.So this project intends to accomplish these points as goals: The general objectives of our project are:

1. To help to know about necessary details for a new student, visitor or a staff.

2. To help in the day to day routine and activities in college management.

The specific objectives of our project are:

1. To keep the attendance record of students.

2. To provide relevant notices, results, routines.

3. To facilitate student teacher interaction.

4. To create individual profile of students and staffs to create friendly and secure environment.

The colleges will get benefit from our application tofacilitate staffs and students for the college management by providing the features of attendance record,students-teachers interaction and individual profile of all members of the college that will provide relevant and necessary information, notices and file enhancing a collaborative environment. This project intends to aid as a prototype for a project alike platform that would include more colleges in near future.

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eTaxi Service

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Our project is motivated to provide more comfort ability in this service. We focus on developing an Android based application on this service. By this application the passenger can get the taxi service even without walking a step of walk. We are focusing our project to use application in the Pokhara, the City of Beauty of Nepal. We can request the taxi service nearby to our current location, to reach required destination with transparent taxi fare.

- to select a desire destination location by clicking on map interface by passenger.
- to provide passenger an interface to view nearby drivers on the map.
- to select one of the driver nearby by the passenger.
- to get review of the duration and taxi fare for the certain destination on the basis of type of road(i.e Highway or City Road).
- to notify nominated driver about booking done by certain passenger nearby him.
- to cancel the booking done by the passenger

On the various stages of the project development, researches of various aspects were done. In every stage, we had to face many challenges such as redesigning of the database time and again to the way of compactness and accuracy, adjustments with the limited resources such as environment, computer supports, testings, dealing with new updates of IDE, framework at the time of project. But due to the implementation of Git, the project went on smooth development process during implementation. Our project provides a prototype application that contains all the features which we mentioned in the objective above. The project development was adopted with incremental waterfall development process, where we got new ideas during the development process. By the use of this app, we could see many possibilities of facilities that can enhance the productivity of the users such as daily travel expenses, driver income statistics, get aware of his current location so that he/she may not get lost in the city who are new and many more.

CRM

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GCES CRM is a software constructed in order to make the dealing business between dealer and the customer easier. This software is based on the management of customers and employee in an organization. It works on making user more interact with the service providing company. This application has an interaction with the user so that they can facilitate with high services and motivated to visit again and again. It keeps life long relationship with the service user.

1. Invoice Automation Generation
2. Provide Product Management System
3. Provide Order Management System
4. Support Ticket
5. Page Creation and Management

From this project we will be able to provide best customer relationship between the user and the service provider. We will be able to get the necessary review and feedback from the users and helps to make the new user as our permanent life-long user. From this project users will be benefited by allowing them to put their respective enquiries and by making delivered of invoice in their respective e-mail. This project will be helpful in conducting friendly environment between user and the service providing organizations.

Lavender Hospital Management System

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Lavender, Hospital Management System is a web application build with Laravel (PHP framework), Angular 2, HTML, CSS, and JavaScript. As a hospital management system, it will include staff, in-patient and out-patient, lab, pharmacy, patient-portal, billing and reporting modules. Main motive to develop this system is to manage the lack of proper communication between all the departments present in the hospital and maintain all the health log of a patient so that the records are easily available to the patient and doctors for further use.

1. GENERAL OBJECTIVE

To create a Hospital Management System to replace current manual workflow.

2. SPECIFIC OBJECTIVE

a. To develop efficient, inter department communication system
b. To maintain patient log
c. Ensure availability of the information on-the-go

After implementation of this project, workflow of hospital will be optimized. Due to use of digitized system, communication among the departments, staff, patients and doctors will be easier and reliable. Beside that, while developing this system we as a student got chance to study n understand the need and complication of implementation of digital system by replacing the paper based manual system. Lavender

Hospital Management System as a whole make interdepartment communication easier,keep the record of patient log safely and will be faster,easier and reliable than paper-based manual system.

Local Governance Information System (LGIS)

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This project is for developing a Web and mobile app that will regulate the governance information. This project is focused on developing a Local Governance Information System (LGIS) that provides information about the different provinces and local government units that are formed by grouping together the existing districts and also details about other government entities namely gaunpalikas and municipalities.

The main objective of this project is to build a system that provides access to all, to every piece of information of the Central and Provincial Government and of public importance. It also increases government and citizen interaction plus the information awareness built towards knowledge-based society in the country.

A working prototype has been constructed and different datasets are available for the beta testing. The project is hosted at http://45.77.37.210

MazeVR

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MazeVR is an Android game application based from unity game engine. It is a virtual reality powered game where android smartphone is used as Head Mounted Display (HMD) for the headset. This game can be played both on mobile or tethered headset. This game is a simple yet powerful demonstration of what a technology can achieve by the use of a smartphone. Coming to the game itself, it is as simple as it is named. The objective of the game is to solve and maze and get out of it.

The goal of the project is to design and implement a 3-dimensional game written in C# with unity. The project includes a complete game with documentation and user guide. The level will include everything that should be available in a FPS game. The main objective of this game is for the user to solve the confusing maze rooms to find the exit. In conclusion, the objectives of the project are:

1. To develop a well-developed and well refined VR game.
2. To develop an intuitive user interface for the game.
3. To indulge user with fun and mystery of a puzzle solving sensations.

We have designed and developed a VR game that is unique in its taste and genre. Although there were complications and hurdles along its development, by continually refining and solving the errors and bugs, we have created a game which is 80% complete. Some final touches remain to make it the game that we intended from the start.

Pharmex

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Pharmex is an android-based application that primarily lets users buy pharmaceutical products using their smart phone devices. This application is useful to people of all ages. It uses Android SDK, Java Programming Language and MySQL server for remote database as the major tool for application development. The major outcome of this application is that users dont have to wander for a product. Instead they can open the app and search the product they want and contact to the owner and so on. This saves a lot of time and as we know, time management is a must in this todays leading world. Thus this application comes in handy.

The core objective is to make the relation between the seller and the consumer of pharmaceutical products more formal.

Routes Nepal

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RoutesNepal is a system in which, the map of the city and information about some trekking area of Nepal are provided to the people in their phone which they get them via installing this application into their android phone. The side bit also consist of the details about their desired placed(mainly remote area) which will be posted by authenticated users(if available). Another main feature of this application is to provide the shortest and reliable paths showing the place in between. Beside aforementioned features it will trace those users who are using this app; it will be very beneficial to be friends among unknown persons.

To find the desired location with all possible paths with estimated time.

To trace all travelers who are using this app and to provide the basic information about amenities like hotels, health post(near by places).

The main purpose of this application are: to find the desired location with all possible ways with estimated time, to trace all travelers who are using this application and to provide the basic information about amenities like hotels, health post(nearby places). This is Android and web based system with several features mainly providing the desired location of user. The result shows the potential proofs of employment of such algorithm/approached for this type of system. Our effort is to employ Routes Nepal system within the time by using Java as programming language.

Survival Shooting

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Survival Shooting is an application of unity. The game is a 3D single player shooter game creating using C#. This game will depict the retire life of an army who fought war. The story was adapted from the real life of some soldiers who frequently have nightmare about the wars. This game is more fascinating to the people who are interested in having thriller experiences. The main character is Jason who a retired soldier is staying alone at his home after retirement and the enemies tries to attack him even at his home. The mission of Jason is to survive as long as he can as he will have a weapon to defend himself. Health is spread throughout the level and so he can constantly search for resources. The main focus on our game will be to provide realistic environment to the player with high graphics.

The purpose of the project is to design and implement a 3-dimensional game written in C#. The project includes a complete level of game with documentation. The main target of the game is to aim those gamers who are horror game lover. Our team members dont take aim at developing an instructive game; instead the aim is action. Aim of game is to develop and optimize AI for opponents so that their attack strategy looks realistic. To add visual effects and sound effects in the final release. To make the game visually appealing by replacing the placeholders with real assets.

We have designed and developed First Person Shooting Game . Although there were complications along its developments by continuously solving problem and bugs, we have completed a 80% of our project.

Zyaala

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Zyaala is a website for online marketplace of outsourcing jobs.
1. To allow users to post job.
2. To allow users to work on the job.
3. Allow users to bid for posted job.
4. Provide money transaction between hirer and worker.
5. Display location based job

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