

Graduation Project Ideas
Proposed By
Faculty Members
Department of Computer Science

Faculty Member	Research Interests	Project Titles
Dr. Nazir Ahmad Zafar	-Formal Methods, - Safety Critical Systems, -Integration of approaches and Modeling	1-Developing Finite-State-Based Vending Machine 2- Linking UML and VDM++ For Developing Library Management System
Dr. Hafiz Farooq Ahmad	-Semantic Systems, -Web and Health Informatics	1-Digital Mother Child Health Handbook (MCHH) 2-Tibbe Nabvi Health App
Dr. Khalid Rajeb	-Distributed Systems, - Peer to Peer and -Parallel Programming	<i>Nil</i>
Dr. Afaq Hussain	-Artificial Intelligence, -Computer Vision and -Image processing, - Data Structures and - Algorithms	<i>Nil</i>
Dr. Asrar ul Haque	-Swarm Intelligence, -Distributed Systems, Wireless and Sensor Networks	1-Medical Expert System 2-Personal Hajj E-Guide
Dr. Abdul Raouf Khan	Theory and Applications of Cellular Automata, -Image Processing, -Data Security and -Computer Architecture	<i>Nil</i>
Dr. Yasser Moustafa Ali Fouda	-Image Processing and Multi -Model Biometric	<i>Nil</i>
Dr. Muhammad Bilal Ahmad	-Image Processing, -Computer Vision and -Machine Learning	1-Panoramic View Generation of Khana Kaba 2-Automatic Class Attendance System using Face Detection
Dr. Shakeel Ahmad	Software Engineering, -Mobile Adhoc Networks and -Information Systems	Course Coordination Web Portal for Saudi Arabia Universities

Dr. Abdunour Bounsiar	-Artificial Intelligence, -Data Mining, -Sorting Algorithms, -Machine Learning, - Image processing and -Signal processing	1-Access control via automatic car plate recognition 2-Voice control of computer mouse
Mr. Marwan Elhaj	-AI, -Programming, -Image Processing, -Computer Architecture and Algorithms	Exam Scheduling and Management System (ESMS)
Mr. Noor Zaman	-Wireless Sensor Network -Web Development, -Android Applications and Networking	Projects Archives App for CCSIT
Mr. Muneer Ahmad	Bio-informatics and Health Informatics	Jobs scheduling and resource management system
Mr. Zahid Hussain Qaisar	-Software Quality Assurance, -Software Testing, -Artificial Intelligence and -Software Quality Assurance	Desktop Doctor(Expert System)

Project 1	
<i>Project Title</i>	Linking UML and VDM++ For Developing Library Management System
<i>Proposed By:</i>	Dr. Nazir Ahmad Zafar
<i>Brief Description</i>	The objective of the project is to identify a relationship and to link Unified Modeling Language (UML) and Vienna Development Method (VDM++). Although UML as well as VDM++ support object oriented development, however, both have their limitations. For example, UML is based on graphical models and is prone to causing errors. The unseen semantics under the UML diagrams causes ambiguities and inconsistencies in the models at design level. VDM++ being formal language is based on mathematical structures and difficult to apply at initial phases of software development. Therefore, it will be interesting to link both approaches to support a complete systematic software development process. Library Management System will be taken as a case study to make practice of this integrated approach.
<i>Expected Learning Outcomes</i>	The students will be able to <ul style="list-style-type: none"> • Understand and analyze modeling power of UML and VDM++ to develop meaningful models • Apply specialized mechanisms to explore and capture the core functional concepts • To provide a formal basis for developing any system • To integrate best practices in terms of linking popular object oriented techniques • Apply integrated approaches by taking a simple case study, that is, Library Management System
<i>Expected Project Outcomes</i>	<ul style="list-style-type: none"> • UML Model of Library Management System • Formal VDM++ validated model • Verified implemented system
<i>Available Resources</i>	NIL
<i>Required Resources</i>	<ul style="list-style-type: none"> • VDM++ tool
<i>Skills Required</i>	<ul style="list-style-type: none"> • UML and • VDM++
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	Students will be provided training of VDM++
<i>Contact information</i>	Email:- nazafar@kfu.edu.sa Ext:- 8139

Project 2	
Project Title	Developing Finite-State-Based Vending Machine
Proposed By:	Dr. Nazir Ahmad Zafar
Brief Description	System specification and design have become important activities in software engineering. The design of complex and automated systems requires techniques for specification, capturing functionalities and control behaviors. Unified Modeling Language (UML) has become de-facto standard for design of object oriented systems. Automata are abstract models of machines which can be represented using diagrams. Automata theory has emerged with several modern applications in software engineering, for example, optimization of logic based programs, specification and verification of protocols. Automata theory is ideal one for modeling control behavior in terms of diagrams and mathematical relationships among system functionalities. Graph-based formalisms (automata) have been predominant in systems development and can be effectively verified by various model checkers. The objective of the project is make practice of software engineering approaches, UML, graphs, algorithms and automata theory, to model and develop vending machine.
Expected Learning Outcomes	The students will be able to <ul style="list-style-type: none"> • Make practice of UML, automata and software engineering in modeling of automated systems • Design vending machine using UML diagrams • Automate and optimize the machine by application of automata theory • Transform the automated model to mathematical model, procedures and algorithms • Implement the machine based on above models by any of the object oriented language
Expected Project Outcomes	<ul style="list-style-type: none"> • Finite state based model of the vending machine • Generic automated model of the machine • Visual implemented system
Available Resources	NIL
Required Resources	<ul style="list-style-type: none"> • Any tool required for modeling UML diagrams, for example, Rational Rose • JFLAP Tool: Building a Finite Automaton
Skills Required	UML, Language Theory and Finite Automata
Specialized Tutoring/Help to be provided by the Supervisor	Not required
Contact information	Email:- nazafar@kfu.edu.sa Ext:- 8139

Project 3	
Project Title	Digital Mother Child Health Handbook (MCHH)
Proposed By:	Dr. Hafiz Farooq Ahmad
Brief Description	<p>Wellbeing and care of a mother during pregnancy is vital for a healthy child birth. Necessary guidelines and information handbooks for expecting mothers and families have been prepared for awareness and tracking health progress of mother and the baby. Japan took such an initiative in 1947 to develop Maternal and Child Health Handbook (MCHH). The outcome of the initiative was a drastic decrease in Infant Mortality Rate (IMR) from 76.0 deaths per 1000 live births in 1947 to 2.6 in 2007. From 1947 to 2007, IMR decreased by 50% annually and currently it is well below the Millennium Development Goal (MDG) target set by the UN for 2015. In this project, we propose to develop general system architecture of Digital Maternal and Child Health Information System that would also be localized according to any specific requirements of Saudi Arabia. The proposed system may be used to maintain health record of mothers and babies from conception to delivery. Such a system can help improve the quality of healthcare for mothers and babies in Saudi Arabia. The requirements will be based on various sources including Japan Maternal and Child Health Handbook and Common Requirements for Maternal Health Information Systems proposed by Program for Appropriate Technology in Health (PATH). The proposed system may be decomposed into sub-systems such as pregnancy medical record, child health information, information and awareness and decision support systems. A prototype system encompassing some of the key features would also be developed.</p>
Expected Learning Outcomes	<ol style="list-style-type: none"> 1. Health informatics knowledge for design of systems 2. Software requirements specification 3. Systems design and architecture 4. Medium project implementation
Expected Project Outcomes	<ol style="list-style-type: none"> 1. Requirement analysis and requirement specifications for the proposed system (proposal phase) 2. Prototype implementation
Available Resources	No special requirements
Required Resources	No special requirements
Skills Required	Java, Android development or related skill in design and implementation
Specialized Tutoring/Help to be provided by the Supervisor	<p>Domain knowledge of health informatics Software requirements modeling and specification in healthcare Software architecture and design</p>
Contact information	Email:- hfahmad@kfu.edu.sa Ext:-9228

Project # 4	
Project Title	Tibbe Nabvi Health App
Proposed By:	Dr. Hafiz Farooq Ahmad
Brief Description	<p>Healthcare and wellbeing of an individual is the most important aspect of human life since ancient times. Nature has created herbs with medicinal properties to keep human being healthy. Prophet Muhammad (PBUH) has described these facts at a number of occasions. More than 800 years ago, researchers, such as Ibne Al Qayyim, compiled the sayings of the prophet about herbal used for medicine and this practice is still continued. Use of herbs for curing illness has been used all over the world since prehistory times and there has been strong interest recently to use herbs. As per WHO, herbal medicine had prominent role to contain and treat severe acute respiratory syndrome (SARS) in China [1]. Eighty per cent of African populations use some form of traditional herbal medicine. The worldwide annual market for these products approaches US\$ 60 billion. Many hope traditional herbal medicine research will play a critical role in global health. China, India, Nigeria, the United States of America (USA) and WHO have all made substantial research investments in traditional herbal medicines.</p> <p>Though the project aims to create general awareness among masses about the herbal medicine but in particular this project focuses on the sayings of Prophet Muhammad (PBUH) and the research carried out by many scholars on these aspects. This project will carry out requirement elicitation and specification for an app namely “Tibbe Nabvi Health App” in the first phase and implementation in the next phase. A vast literature in the forms of papers and books are available but no application with modern technology has been designed and implemented. A number of challenges specially usability and requirements gathering will be addressed in this project. Working prototype will be implemented in phase II.</p> <p>Reference</p> <ol style="list-style-type: none"> 1. http://www.who.int/bulletin/volumes/86/8/07-042820/en/
Expected Learning Outcomes	<ol style="list-style-type: none"> 1. Role of herbal medicine in healthcare 2. Software requirements specification 3. Systems design and architecture 4. Medium project implementation
Expected Project Outcomes	<ol style="list-style-type: none"> 1. Requirement analysis and requirement specifications for the proposed system (proposal phase) 2. Prototype implementation
Available Resources	No special requirement
Required Resources	No special requirement
Skills Required	Java, Android development
Specialized Tutoring/Help to be provided by the Supervisor	<p>Domain knowledge of health informatics</p> <p>Survey of the herbs as in Tibbe Aabvi literature</p> <p>Software requirements modeling and specification in healthcare</p>
	Email:- hfahmad @kfu.edu.sa, Ext:-9228

Project # 5	
<i>Project Title</i>	Medical Expert System
<i>Proposed By:</i>	Dr. Asrar Haque
<i>Brief Description</i>	Health is a basic necessity of life for all human being across the globe. To ensure that every one has access to health facilities, it is important to provide tools for the physicians so they can offer proper medical advice to their patients. Currently a group of students are working on project to remotely gather patient data using an app. In this project students will design and build an expert system that will interact with patients app to help a physician monitor health condition of a patient and advice remotely.
<i>Expected Learning Outcomes</i>	Students will be able to: <ul style="list-style-type: none"> • Analyze current how to gather patient data remotely • Design a system to integrate an app • Apply knowledge building a system
<i>Expected Project Outcomes</i>	<ul style="list-style-type: none"> • Survey of technologies related to collecting patient data remotely • Designed Expert System
<i>Available Resources</i>	Tools related build web based system, ADT etc
<i>Required Resources</i>	
<i>Skills Required</i>	Related to HCI, AI, Developing an App
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	N/A
<i>Contact information</i>	Email:-ahaque@kfu.edu.sa Ext:-8145

Project # 6	
<i>Project Title</i>	Personal Hajj E-Guide
<i>Proposed By:</i>	Dr. Asrar Haque
<i>Brief Description</i>	Hajj, the pilgrimage to Mecca, is an obligatory responsibility to be carried out at least once by all Muslims who are capable. Hajj is currently the largest annual pilgrimage in the world. The rituals of hajj are not very easy to comprehend. The students will explore how to design and build an app that can be used during hajj as real time guide.
<i>Expected Learning Outcomes</i>	Students will be able to: <ul style="list-style-type: none"> • Analyze localization techniques • Design a app to integrate hajj rituals to be used as a real time guide • Apply knowledge of building as app
<i>Expected Project Outcomes</i>	An app that can be used as a hajj guide
<i>Available Resources</i>	App building tools
<i>Required Resources</i>	N/A
<i>Skills Required</i>	Designing and building an App
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	N/A
<i>Contact information</i>	Email:-ahaque@kfu.edu.sa Ext:-8145

Project# 7	
<i>Project Title</i>	Access control via automatic car plate recognition
<i>Proposed By:</i>	Dr. Abdenour Bounsiar
<i>Brief Description</i>	The objective of this project is to introduce the students to image processing techniques through a common and very useful application which is automatic car plate recognition. The students will have to design a system for access control through the recognition of car plate characters from camera images. Although a real system will require the use of a real camera to capture car plate images in real time and then control a real access gate, this project will only focus on the image processing side for previously captured car images. The students will have to perform necessary pre-processing treatment for car palate images like binarization and histogram calculation. The students will then have to extract the car plate region from the car images through some techniques, like image segmentation and region detection, before proceeding to characters recognition by using some technique of pattern recognition. In addition, the students will propose a simulation interface.
<i>Expected Learning Outcomes</i>	<ul style="list-style-type: none"> • Understanding some techniques of image pre-processing like binarization and histogram calculation. • Understanding some techniques of image processing like image segmentation and region detection. • Understanding some techniques of pattern recognition which applies to image processing. • Application of image processing techniques • Application of pattern recognition techniques
<i>Expected Project Outcomes</i>	<ul style="list-style-type: none"> • A module for preprocessing of car plate images • A module for car plate character recognition • A graphical interface for image acquisition and management. • A graphical interface for recognized plate display • A graphical interface for access gate control.
<i>Available Resources</i>	
<i>Required Resources</i>	<ul style="list-style-type: none"> • Matlab with image processing toolbox
<i>Skills Required</i>	<ul style="list-style-type: none"> • Good mathematical and programming skills • Interest for image processing applications
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	<ul style="list-style-type: none"> • Image processing techniques • Pattern recognition techniques
<i>Contact Information</i>	Email:- abounsiar@kfu.edu.sa Ext:- 8127

Project # 8	
<i>Project Title</i>	Voice control of computer mouse for arm-disabled people
<i>Proposed By:</i>	Dr. Abdenour Bounsiar
<i>Brief Description</i>	The objective of this project is to introduce the students to speech processing techniques through a useful application which is voice control of computer mouse for arm disabled people. The students will have to design a system for computer mouse control through the recognition of simple speech commands from human voice by using a microphone. The system will allow arm injured and/or disabled people to use their computer mouse through various voice commands for various movement directions and specific tasks like “click” and “double-click”.
<i>Expected Learning Outcomes</i>	<ul style="list-style-type: none"> • Understanding preprocessing techniques for voice signal • Understanding signal processing techniques relevant to representation of voice signal • Understanding pattern recognition techniques relevant to voice signals. • Applying signal processing techniques for voice signals • Applying pattern recognition techniques for voice signals •
<i>Expected Project Outcomes</i>	<ul style="list-style-type: none"> • A module for speech acquisition through microphone • A module for voice preprocessing • A module for voice command recognition • A graphical interface for the system command.
<i>Available Resources</i>	
<i>Required Resources</i>	<ul style="list-style-type: none"> • Matlab with signal processing toolbox
<i>Skills Required</i>	<ul style="list-style-type: none"> • Good mathematical and programming skills • Interest for speech processing applications
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	<ul style="list-style-type: none"> • Speech and signal processing techniques • Pattern recognition techniques
<i>Contact Information</i>	Email:- abounsiar@kfu.edu.sa Ext:- 8127

Project # 9	
<i>Project Title</i>	Automatic Class Attendance System using Face Detection
<i>Proposed By:</i>	Dr. Muhammad Bilal Ahmad
<i>Brief Description</i>	It is important to have automatic class attendance system in schools. Teachers are unable to calculate timing of students in the class. Teachers can only mark present, absent or late, but he does not keep the exact timing of the students in the class. Students can also use proxies. Using face detection algorithm of image processing will help to make automatic attendance of students and their total time in the class. Cameras will be installed in the class rooms and they will be connected to the remote system. Videos will be stored and searched for the students presence in the class according to the time-table of the classes. Students will be detected using the face detection algorithm. A few assumptions will be made to simplify the system so that the system should be implemented and tested. The system will also help the administration to monitor the class timing and participations.
<i>Expected Learning Outcomes</i>	<ul style="list-style-type: none"> • Students will learn basics of image processing • Students will learn remote access of cameras • Students will learn the field of automatic face recognition algorithms • Students will learn how to develop an online system by connecting the videos from the camera with the database of students and class time table
<i>Expected Project Outcomes</i>	<ul style="list-style-type: none"> • An online system for automatic attendance of students will be made • Cameras will be installed in the classes for automatic monitoring of the classes • Creation of automatic attendance system and embedding with university portal system
<i>Available Resources</i>	
<i>Required Resources</i>	<ul style="list-style-type: none"> • Matlab with image processing toolbox • Visual Programming (Visual C++) • Web Programming
<i>Skills Required</i>	<ul style="list-style-type: none"> • Good mathematical and programming skills • Have strong interest of Digital Image Processing and Computer Vision
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	<ul style="list-style-type: none"> • Basics of Digital Image Processing • Algorithms of Automatic face detection from digital images
<i>Contact Info</i>	Email:- mzulfiqar@kfu.edu.sa Ext:- 9218

Project # 10	
Project Title	Panoramic View Generation of Khana Kaba
Proposed By:	Dr. Muhammad Bilal Ahmad
Brief Description	<p>Creation of Panoramic view from 2D images of important places helps users to see and visualize the places from their computer very similarly as they were actually standing at some point in the place and see around. In this project, students will first start to create Panoramic view of King Faisal University and then apply the same algorithm for Khana Kaba.</p> <p>Panoramic view is generated by the technique of stitching spatially closed images of a scene. Seamless stitching of images requires sophisticated algorithms. The process of stitching images one by one is continued till we are able to get the whole (360 degree) panoramic view of the scene. After creating the panoramic view, VRML (Virtual Reality Markup Language) or any other language is used to display the 3D view of the scene. This project is a very interesting as this will help us to preserve 3D views of important archeological sites.</p>
Expected Learning Outcomes	<ul style="list-style-type: none"> • Students will learn stereo imaging and image stitching algorithms • Features extraction and matching algorithms will be learnt • Students will learn creation of 360 degrees Panoramic view of scenes • And students will learn how to view 3D images on the screen using VRML • Students will also make database of images of KFU and Khana Kaba • Students will experience web programming
Expected Project Outcomes	<ul style="list-style-type: none"> • Students will built image stitching software • Panoramic view software will be made by enhancing the stitching algorithm • Hosting the system on web to generate online panoramic views of scene for which images will be provided
Available Resources	
Required Resources	<ul style="list-style-type: none"> • Matlab with image processing toolbox • Visual Programming (Visual C++, C#, DotNet) • Web Programming
Skills Required	<ul style="list-style-type: none"> • Good mathematical and programming skills • Have strong interest of Digital Image Processing and Computer Vision
Specialized Tutoring/Help to be provided by the Supervisor	<ul style="list-style-type: none"> • Basics of Digital Image Processing and Computer Vision • Algorithms for Image Stitching
Contact Info	<ul style="list-style-type: none"> • Email:- mzulfiqar@kfu.edu.sa • Ext:- 9218

Project # 11	
<i>Project Title</i>	Exam Scheduling and Management System (ESMS)
<i>Proposed By:</i>	Mr.Marwan El-HAj
<i>Brief Description</i>	Exam Scheduling and Management System (ESMS), is a scheduling system that targets an Exam Committee in any academic institute to help them implementing exam schedule , satisfying hard constraints and soft constraints specified by the institute. The Problem of Scheduling is a common problem investigated by many researchers ,many approaches were introduced to handle such a problem that searches for the optimal solution in scheduling Exams verses available resources (Time, Hall, invigilators, Supervisors)with no contradiction and achieve fairness among Students
<i>Expected Outcomes</i>	The outcome of this software should be: 1. Literature review about previous work(Research Papers) 2. Comparison of the different approaches investigated in Literature review 3. Exam Scheduling and Management Software that is implemented on one of the approaches investigated, or on a new approach if possible
<i>Available Resources</i>	All resources needed Are available in the university, Books, Internet, Electronic library
<i>Required Resources</i>	None for Now
<i>Skills Required</i>	Excellent skills in English language, software engineering, Programming, database
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	None, Student already has the required essentials, he/she has to expand what they know to target a solution to this problem.
<i>Contact information</i>	Email:-Maelhaj@kfu.edu.sa Ext:-8135

Project # 12	
Project Title	Jobs scheduling and resources management system
Proposed By:	Muneer Ahmad
Brief Description	<p>This project aims at scheduling the jobs of people in a professional organization along with resources management. Better Jobs scheduling and efficient resources management plays a key role in the progress of companies. Companies normally have a good number of employees that have been assigned different tasks with defined time span. These tasks are managed by managers who distribute the tasks to its team. A task has normally high, medium and low priority with defined time frame and certain restrictions (team members have access level to access and submit the tasks). One employee in this group may have one or many tasks and many employees may serve over one or many tasks. The proposed job scheduler will be able to efficiently manage the employees in groups/teams. Each group will be assigned tasks with timeline, priority of task, access level to task and reward points that will determine the contribution of employee towards successful completion of tasks. The delayed or incomplete tasks will incur penalties to employees in group. In addition, the group members will be given resources to utilize and complete the tasks. The resources will be distributed to members along with resource type and quantity. The proposed automated system will also manage resources and will summarize the details of tasks and resources to relevant manager at the end of group tasks.</p> <p>The proposed system will have an admin that would be able to add / delete / modify different managers (each manager is supposed to be responsible for one department / section). Managers are the people who would classify the employees based over their job nature / area of interest. Admin would notify the jobs to managers and managers would distribute the jobs to people in departments. One job could be divided into a group of tasks defined by manager with task completion time frame and priority of task. People in the department have to attend the tasks based over priority and time frame. The outcomes of the tasks would be submitted to manager. The system would keep track of a scoring scheme assigned for task submission (e.g. early task completion, in time completion, late completion). Admin, managers and people will have a certain access level to the system. The resources being used to complete these tasks would also be managed by the system.</p>

<i>Expected Learning Outcomes</i>	<p>The students would be able to learn,</p> <ul style="list-style-type: none"> • To schedule jobs based over their priorities and time frames in any professional organization. • To manage resources in a large organization. • To apply knowledge of computing, e.g. algorithms, data structures principles, data bases and programming languages. • To create a prototype model of business environment scalable to be used for development of ERP/ ERM models. • To learn and apply tools and techniques for development of projects.
<i>Expected Project Outcomes</i>	<ul style="list-style-type: none"> • Scheduling of jobs based over priority and deadlines • Implementation of access level / privileges of different employees to jobs and resources in an organization • Enterprise resource management
<i>Available Resources</i>	No special resources required.
<i>Required Resources</i>	No special resources required.
<i>Skills Required</i>	Web based programming languages like ASP.net, PHP, JSP can be used with SQL server database. Server / client side programming can also be made using Java / C#
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	No special tutoring required.
<i>Contact Information</i>	Email:- mmalik@kfu.edu.sa Ext:- 8133

Project # 13	
<i>Project Title</i>	Course Coordination Web Portal for Saudi Arabia Universities
<i>Proposed By:</i>	Dr. Shakeel Ahmed
<i>Brief Description</i>	This project aims to create a website which allows both undergraduate and post graduate university students and faculty across Saudi Arabia to become part of an scholastic society dedicated to education and learning from each other which can be proficient done by creating a website.
<i>Expected Learning Outcomes</i>	On successful completion of the project students will be able to... - Plan and implement a software with the computer science skills. -Design a composite computer science project; - Evaluate, overcome, and reflect on the difficulties of managing complex computer science projects.
<i>Expected Project Outcomes</i>	1. Allow users who are in different universities and different colleges, yet taking similar courses, to ask and answer questions related to the courses they are taking. 2. Allow users to view information about their own college, which includes class locations, class times, information about professors, book reviews, the ability to chat with classmates, and much more
<i>Available Resources</i>	College has all the infrastructure available
<i>Required Resources</i>	Nothing Specific
<i>Skills Required</i>	Web based programming languages like ASP.net, PHP, JSP can be used with SQL server database.
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	To guide the students and suggest them to carry out the project effectively.
<i>Contact Information</i>	Email:-shakeel@kfu.edu.sa Ext:-8132

Project # 14	
Project Title	Archives App for CCSIT
Proposed By:	Noor Zaman
Brief Description	<p>In the absence any project archives system the selection and finalizing an appropriate title for project proposal is always an issue, for students and faculty members simultaneously at College of Computer Science and Information Technology (CCSIT). An efficient project archives system containing complete information for previously conducted projects and for upcoming new project ideas is required at CCSIT. The proposed project idea regarding <i>Archives App for CCSIT</i> will be an Android based app. This will be available on Google play stores and can be freely available to all students and faculty members at same time. This project will address the existing issue of project archives of CCSIT for faculty members and students. It will work in two folds, firstly by providing complete information regarding previously successfully completed projects at CCSIT to avoid the duplication in choosing topics; secondly at the same time it will also facilitate faculty members to float new ideas besides of allowing students to choose the idea for their projects. The proposed app will serve CCSIT's management, faculty members, quality office and students at the same time by providing updated projects archives. Furthermore, this idea can be extended by providing archives for co-op training students which can assist students for previously completed ideas and by providing companies information. Any students having programming skills related to Java, eclipse and C can work on this idea.</p>
Expected Learning Outcomes	<p>The students would be able,</p> <ul style="list-style-type: none"> • To manage conducted projects resources at one platform. • To apply knowledge of computing, e.g. Java, Eclipse, SDK, data bases. • To create a prototype model, appropriate analysis and to develop ERP/ERM models. • To learn and apply tools and techniques for development of projects.
Expected Project Outcomes	<ol style="list-style-type: none"> 1. It will provide assistance to students for choosing their project titles timely and accurately. 2. Assist faculty members to avoid repetition of implemented ideas. 3. Help students to choose/select new proposed project ideas 4. Help faculty members to streamline resources and propose new ideas for students
Available Resources	Almost all resources are available.
Required Resources	No special resources required.
Skills Required	<p>Following skills are required,</p> <ul style="list-style-type: none"> • Java • Eclipse

	<ul style="list-style-type: none">• Android development• SQL Lite and• Additional helping tools during project proposal.
<i>Specialized Tutoring/Help to be provided by the Supervisor</i>	<ul style="list-style-type: none">• Domain knowledge and guidance• Existence problem statement information• Required literature review guidance• Software requirements modeling and specification• Software architecture and design
<i>Contact Information</i>	Email:- nzaman@kfu.edu.sa Ext:- 8142

Project # 15	
Project Title	Desktop Doctor
Proposed By:	Zahid Hussain Qaisar
Brief Description	<p>This project is designed to implement an expert system. Expert system will mimic the behavior of a doctor and will help the patient in prescription by analyzing the symptoms of the disease the patient. Patient will input the symptoms and feelings and on the basis of these symptoms and feeling system will prescribe the medicines. Scope of the project will be discussed with the students depending upon their expertise as it can have very wide scope. This system will also be helpful for the doctors as it will give series of diagnosis and from these diagnosis doctor can choose one appropriate diagnose. We will focus on some particular diseases not all the diseases. We will use AI based techniques to make expert system. LISP, Prolog and Matlab can be used for the implementation . A database or inference system will be designed which can infer the diagnosis on the basis of symptoms entered by the patient. Also system can evolve on the new inference.</p>
Expected Learning Outcomes	<ol style="list-style-type: none"> 1. Produce a full set of requirements for the proposed system 2. Rule based inference system. 3. Design and implement a prototype version of the proposed system 4. Produce a database that allows for storing manually added info such as name of species, gender, age, location, time of year, numbers observed etc. 5. Produce a database that communicates with different files 6. Test and evaluate the system 7. Advanced objective: develop a further prototype, based on the evaluation
Expected Project Outcomes	Design, produce and evaluate software that allows access, tabulation and graphical display of system which is going to facilitate the patients. It is helpful for the patient as well as for the doctors. Students will be able to design and implement the expert systems.
Available Resources	
Required Resources	
Skills Required	Expert system, Lisp, Prolog, AI, command on AI based tools
Specialized Tutoring/Help to be provided by the Supervisor	
Contact Information	Email:- zqaisar@kfu.edu.sa Ext:- 8137