No.	Dr. Name	Project Title	Description	Department
1	Dr. Mozaherul Hoque	Online Audio Repository	Archiving audio lectures is beneficial for any educational institute. Making the archive available online enables easy access to the archived lectures. But there are technical challenges with regard to storing format, file size, and serving the audio over the net. In this project the students have to build online tools and a repository that can convert audio to appropriate format before uploading, develop a well designed website to serve the audio, and provide multiple channels for listening to the audio. The focus of the project is on usability of the system.	both
2	Dr. Muhammad Badruddin Khan	Web based Life Management System	In order to live a successful life, one must set the priorities. A Generic target setting can help a person to improve the life. Using the system, a user will be able to : a) Set his/her targets b) Enter the data periodically regarding his/her target achievement c) Get the reports for any tenure regarding his/her accomplishment	IS
3	Dr. Habib-ur Rehman	Cloning Cell Phone Display on another Cell Phone	We want to design a mobile application that can transmit the screen content of one mobile phone to the other mobile phone. The application can be designed for Android or Windows Mobile or iOS. The project is for at least two students. Students participating in this project required to have good knowledge of Java programming language.	both
4	Dr. Mohamed Saad Saleh	Shoppers Mobile Application	With the continuous advancement of the Information and Communication Technology (ICT) that support enterprises for introducing better and efficient services mobile services is becoming of increasing importance. The idea of the proposed system starts from giving the customer easy tool for shopping at his favorite "Super Market" in a simple and modern way and without human interaction. The target system that needs to be developed would have two important features. It would use the advanced technology in recognizing the chosen product; and it would provide flexible web site that will help in managing his shopping basket. Skills: Java/ASP.net/MySql	IS
5	Dr. Ali A Dawood	Android App for Medical Emergencies and Blood Donation	1) Emergency: If a person in need of emergency situation, then the person will go to the application to find the nearest hospital by locating the hospital on the App. 2) Patients in need to blood donation: Through renewed database that expose the patients, who is in need of blood donation, to information on the status of the patient and if a donor has donated some blood to a patient, the name of the donor will still be in the list. Note:	both

			We can add a database to the principles of first aid, such as bleeding or suffocation with a simple explaining and clear to everyone as simple videos.	
6	Dr. Raad Alturki	Parental Control Service	Parental Control is very important issue these days especially when it comes to use un-classified contents that have to potential for young children to access inappropriate content. The aim of this project is to study current parental control services and propose a good to way to overcome this problem.The students is asked to develop a service to help parents to develop a way to	both
7	Dr. Abdul Khader Jilani Saudagar	School Bus Tracking System	1)Track the school bus location 2) Inform the driver 3) Managing the drivers etc	IS
8	Dr. Asif Jamshed	Parental Control for Movies	A video player is to be developed along with an associated website that filters out objectionable material from movies. The concept should work like the subtitles files and the associated website: www.opensubtitles.org which are used in Windows Media Player Classic. When the user plays a movie in the video player and requests the "filters" file to be downloaded from the website, the player send the file ID information (fingerprint, CRC, name/size info etc) to the website. The associated file is searched for in the database and it is returned. Alternatively, the user can visit the website, and search and download the file himself to load it in the video player. The "filters" file should be a very simple format, much like the subtitles file (.srt) that should specify which interval of the video file to skip (or black out) while playing for censoring purposes. There should be options as to what kind of material to censor: violence, nudity, profanity etc. Users should be able to create accounts and submit their own "filters" files for movies as well as be able to rate and comment on specific "filters" files.	CS
9	Dr. Emdad Khan	Understanding Intelligent Internet and Exploring How to Implement it for Arabic	Internet has changed the world in a significant way. We have seen the progression from portal (Yahoo) to search (Google), to e-Commerce (e-Bay, Amazon) to social networks (Facebook, Twitter). What is NEXT? Well, we see a clear trend that the future Internet is going to be something that can provide very specific, more precise and direct information in a very easy way so that anyone including an illiterate person can access and use it at ease. This has TWO broad parts: 1. Easily imputing information (e.g. by naturally talking). 2. Retrieving more precise information – especially like an answer or a small set of answers, or a summary or drawing some inference (this includes all types of transactions as well). E.g. if we type "how many students graduated from Imam University in CS in 2013?" to any search engine, we will get results like "Imam University, CS Dept, Riyadh, course catalog in CS etc etc", BUT NOT the real answer to the question. This is because the question was NOT understood to begin with, let alone figuring out the answer. Future Internet called Intelligent Internet (IINT) will answer the question like shown above, will	CS

			produce much smaller number of search results (e.g. under 50 results versus millions of results), will provide summary of an article and will draw inference from a report or document. Such an internet is already partially developed [1]. In this project, you will explore how to use existing IINT to develop an Arabic version of IINT. You can implement part of your findings in GP2.	
10	Dr. Arif Bramantoro	Arabic Language Service Development and Composition	This project will collect Arabic language resources, such as translation, dictionary, parallel text, morphological analyzer in the internet, and wrap them as web services. After some language services created, there can be new language services by composing more than one language services by using Business Process Execution Language (BPEL). For example, when there are Arabic-English translation service and English-Chinese translation service, these two services can be composed into new service Arabic-Chinese translation service.	both
11	Dr. Mozaherul Hoque	Intelligent Traffic Signal	Creating a database of Arabic car number plates and an annotation frontend.	both
12	Dr. Mohammad Hussein Fayiz Al-khatib	voice recognition system for handicapped employees	This is a project that uses a voice recognition technique in order to help handicapped employees in a particular governmental / nongovernmental organization. The aim of this project is to help persons in using the voice commands, instead of the usual hand commands, to do the usual jobs such as the printing customer invoices, receipts, reports, ...etc. The student must have a thorough understanding of how to use the voice recognition techniques, and programming languages such as: VB.net, C# ..	both
13	Dr. Waleed M. Rashideh	Online cost monitoring system for information technology projects	In an information technology project, plans are drawn to ensure that the IT work is carried out to the desired quality, time manner, and the IT cost is expended within the preset budget. Projects also are unlikely to proceed in all respects according to plan, especially the cost dimension. This project aim at detecting of potential risk in cost management.	IS
14	Dr. Mohammad Hussein Fayiz Al-khatib	Software implementation for Elliptic Curve Crypto-system	This project aims to provide a software implementation for elliptic curve crypto-system. The aim of this project is to build a software product, which is an efficient crypto-system, that can be used in several projects to encrypt data, and hence to ensure the information security, particularly for computer networks and its related applications The student must have a thorough understanding about the elliptic curve cryptography, and its software implementation using matlab	CS
15	Dr. Muhammad Badruddin Khan	Web based System to collect and analyze Proverbs/Idioms/Sayings from internet	Proverbs/Idioms/Sayings are the features of language. Students are expected to develop an application that contains acceptable number of proverbs/idioms/Sayings in the beginning and system collects their usage using different apis(like twitter). This usage will help in understanding the context in which these proverbs/idioms/Sayings are used.	IS
16	Dr. Habib-ur Rehman	Automated CFP Listing	We are interested in designing a Call for Papers website/web-list which can automatically parse the CFP request received through email and display them. The website would be possibly made using PHP or any other suitable scripting language with MySQL or any other suitable database. The project is for exactly two students.	both

17	Dr. Mohamed Saad Saleh	Web-Based "Kafala Yatem" Management System	In Muslim countries, many organizations offer their services to help Muslims to make their pay for "Kafala Yatem". The problem is that there is absolutely no website that mange the relationship between the "Kafel" and his assigned "Yatem" and no way to track the progress of the "Yatem" life. The objective of this project is to build a web system that allows the "kafel" to have an access to all the activities of his assigned "Yatem" , track his progress from childhood, monitor his school results check his urgent requirements and share in drawing his future...etc. The students' needs to develop a web system, to allow a quick access to all information about the "Yatem". A user-friendly interface is required in addition to text, audio and video features. In this project, the students are requested to develop the system described above. For this, purpose student should run a survey about the different exiting systems (if any). After this, students should start the analysis and the design step during the first term. The second term will be dedicated exclusively to the implementation. Good web programming skills (PHP, Asp.et, ..) MySQL	IS
18	Dr. Ali A Dawood	Context-aware Web service Access	The student will get acquainted with basic authentication techniques as well as modern ones such as context-aware access control. The project is all about designing a simple web service for waiting list scheduling that accommodate contextual attributes.	CS
19	Dr. Raad Alturki	video Games classification website	"The Entertainment Software Rating Board (ESRB) assigns rating information for computer and video games indicating the appropriate age group and content". The problem arise with not having such service in arabic and not having a local standard that takes into account local culture and moral values. This project aims to work in classifications and building a website that provide such info.	both
20	Dr. Abdul Khader Jilani Saudagar	Distributed Learning System	1) Students can view the teachers desktop in the presentation mode 2) Teacher can view and control a students desktop (4 sessions at a time) 3) Voice of teacher can be heard by individual students (VoiP) 4) Students can not have voice communication with one another. 5) Teacher can view voice of the students one to one basis. 6) Teaching session can be recorded through a Desktop Recording	IS
21	Dr. Asif Jamshed	Grade Adjuster	Description In educational institutions where there is a university wide requirement or a departmental policy about absolute grading, instructors may face a difficulty in assigning grades if the score distribution is heavily skewed. They may need to resort to some sort of relative grading (use some curve) but at the same time alter the grades of the students such that the absolute grading criteria is respected. The important and essential requirement being that the relative ranks of the students to each other in the class are not altered. This is usually achieved by the instructors manually adding a "fudge factor" to push up the total score to the required grade score range. There might be other requirements like keeping the total score of final exam less than 40% etc. The other requirement is that the scores that are clustered together should be assigned the same grade. The	CS

			program should be able to read from and write to file containing students score data and details. Deliverables A software with GUI that lets the clients specify different conditions for the "fudge factor"'. Then by manipulating through a mouse, be able to move around different grade cut-off points on a diagram that shows the score distribution and the statistics. There should be an option for grade distribution suggestion that uses statistical analysis for clustering those scores that should be assigned the same grade due to their closeness to each other. Parameters could be adjusted to allow for finer or coarser clustering of grades (or set a requirement as to what proportion of the class may get a failing grade etc). Global setting should make the grades range customizable. Finally the software should be able to read to and from a spreadsheet of student grades and suggest a "fudge factor" to add to appropriate places.	
22	Dr. Emdad Khan	Domain specific Question and Answer System for Internet Applications using an Intelligent Agent and Natural Language Understanding (NLU).	Many Internet Applications today use nice web interface. However, such interfaces in many cases are complex and need some training before users can use them. The complexity of using such applications lies in the following broad areas: a. Too many options. b. Not easily understanding the choices and their implications. c. Long navigation Tree. d. Not easily able to access the associated database as such access is highly structured and constrained. Hence, only expert users can use such applications easily. Some general users can also use them after getting a good level training. Many users who are not computer and internet savvy cannot use such systems. Thus, the need to have easy and natural interface for such systems is becoming increasingly important, especially, with the exponential growth of content in this Information Age. This proposal focuses to develop an easy interface for such systems using Natural Language Understanding (NLU), and thus allowing many general users to get the benefits of such systems. Since development of such a system for all applications is not easy and will take significant efforts, this proposal focuses on a. Show the guidelines for developing such a system for any complex Internet Applications b. Develop such a simple interface to access and interact with the Blackboard system as existing system needs a good level of training and only faculties and students can use it. It is believed that a Question and Answer system using NLU to access and interact with the Blackboard system will enable many general users to use the system. It will also make it easier for students and faculties to use the Blackboard.	CS

			From technical standpoint, there are three key issues to resolve: a. Develop a good rendering system that can render the selected key contents b. Develop a good associated Database queries using Natural Language c. Assemble the desired results in a compact meaningful way and present to the user. An Intelligent Agent (IA) will be used to address these 3 major issues. The IA will use NLU to create equivalent commands and sub-commands to provide correct instructions to the "rendering" engine and also convert the NLU queries into standard Database queries. It will then assemble the correct desired information using Artificial Intelligence techniques and present to the user. The use of Natural Language Understanding (NLU) is the key to make the whole system as a simple Q&A system	
23	Dr. Arif Bramantoro	An application of multi-objective constraint optimization in linear programming	In liniear programming, there are some applications in optimizing the constraints, such as Solver, Lindo, Tora. However, these applications are dealing with single objective optimizations. This project will provide an application to calculate multi objective optimizations.	both
24	Dr. Mostafa Ibrahim	Distributed Fault Detection Algorithm for Wireless Sensor Networks	In recent days, Wireless Sensor Networks are emerging as a promising and interesting area. Wireless Sensor Network consists of a large number of heterogeneous/homogeneous sensor nodes which communicates through wireless medium and works cooperatively to sense or monitor the environment. The number of sensor nodes in a network can vary from hundreds to thousands. The node senses data from environment and sends these data to the gateway node. Mostly WSNs are used for applications such as military surveillance and disaster monitoring. This project proposes a distributed faulty sensor detection algorithm where each sensor identifies its own status to be either "good" or "faulty" which is then supported by its neighbors as they also check the node behavior. The algorithm should be tested under different number of faulty sensors in the same area. The Castalia/Omnet++ WSN frame work is recommended for verifying the functionality of the proposed algorithm. The Project Objectives: 1- Understand the WSN architecture and applications 2- Explore one of the WSN simulators (Castalia/Omnet++). 3- Develop an efficient distributed fault detection algorithm for WSN. 4- Implement a new application on top of Castalia WSN simulator 5- Team working 6- Writing a technical report or a thesis	CS

| 25 | Dr. Mostafa Ibrahim | Cache Memory Simulator | In the first part of this project, you will build a cache simulator. The type of simulator you will build is known as a trace-driven simulator because it takes as input a trace of events, in this case memory references. The trace, which we will provide for you, can be used to drive simulation studies. In this project the memory reference events specified in the trace(s) we will give you will be used by your simulator to drive the movement of data into and out of the cache, thus simulating its behavior. Trace-driven simulators are very effective for studying caches. Your cache simulator will be configurable based on arguments given at the command line, and must support the following functionality:

Total cache size
Block size
Associativity
Write back vs. write through   (if time permitted)

In addition to implementing the functionality listed above, your simulator must also collect and report several statistics that will be used to verify the correctness of the simulator, and that will be used for performance evaluation later in this project. In particular, your simulator must track:
Number of memory references
Number of data misses
Number of words fetched from memory
Number of words copied back to memory

The trace files are in ASCII format, so they are in human-readable form. Each line in the trace file represents a single memory reference and contains two numbers: a reference type, which is a number 0 or 1, and a memory address. All other text following these two numbers should be ignored by your simulator. The reference number specifies what type of memory reference is being performed with the following encoding:
0 Data load reference   (Memory read)
1 Data store reference   (Memory write)
The number following the reference type is the byte address of the memory reference itself. This number is in hexadecimal format, and specifies a 32-bit byte address in the range 0x00000000 -0xFFFFFFFF, inclusive. | CS |

The Project Objectives:
 most important hint is a general software engineering rule: build the
simulator by incrementally adding functionality. The biggest mistake you
 can make is to try to implement the cache functions all at once.
Instead, build the very simplest cache model possible, and test it
thoroughly before proceeding. Then, add a small piece of functionality,
and then test that thoroughly before proceeding. And so on until you've
finished the assignment. We recommend the following incremental
approach:
1- Understand cache memory architecture
2- survey several replacement algorithms
3- Build a unified, fixed block size, direct-mapped cache.
4- Team working
5- Writing a technical report or a thesis

Add other functional blocks for example:
1.   Add variable block size functionality.
2.   Add variable association functionality.
3.   Add a write-back write policy.
4.   Add write through write policy functionality.