DIGIT-ALL

Dept. of Computer Science and Engineering

Gandhi Institute For Technology Bhubaneswar

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Vol.4 Issue.2

DIGIT-ALL

THE E-MAGAZINE, EXPLORES THE TECHNICAL SKILLS OF STUDENTS & FACULTIES. THE MAGAZINE HAS ARTICLES ON LATEST TECHNOLOGIES, CARTOONS, QUIZZES AND MANY MORE FUN FACTS.

EDITORS:

Prof. Smruti Smaraki Sarangi (Faculty)

Lect. Jagannath Ray (Faculty)

Ms. Sukanya Pattanaik (Student)

Mr. Vikrant Rathaur (Student)

Vision of the Department:

To produce the professionals of highest grade, bearing the ability to face the challenges posed by latest computing paradigms, founded by intuitive quality of education and driven by culture of critical thinking and creativity, towards the betterment of humankind.

Mission of the Department:

To Advance knowledge of computing and educate students in major paradigms of computer science and to create a distinctive culture of research and innovation among the budding engineers with collaboration of faculties, technocrats, funding agencies and experts from other premier institutes for generating a pool of professionals and eco-preneurs with the ability to address the Industry and social Problems.

PEOs of the Department

PEO 1: To gain adequate mathematical, computing and engineering principles in order to advance in professional career or obtain better response in higher studies platforms.

PEO 2: To foster the ability to analyze real life problems, perform required research and design computing systems, in accordance to its solutions that are technically sound, economically viable and socially admired and adaptable.

PEO 3: Will have ability to exhibit professionalism, technical skills, communication skills, team work and humanitarian skills in their profession and adapt to current changes by inculcating habit of lifelong learning.

From Editor's desk:

Dear Readers,

Greetings from department of computer science and engineering!

Being a student of the college a few years back and then coming back as a faculty and upon it become an editor of a student magazine, is a feeling that I am unable to scribe in some words. Digit-All began its journey when I departed as a student but I had always been in touch with it and has succeeded in finding a place in my heart.

The contribution and enthusiasm of the students towards making Digit-All a success-story has been applaudable. The beneficiaries of this effort have been a lot of individuals within and beyond the college boundaries. As an editor, I had the utmost support of the students and of all the faculties of the department in turning this endeavor into a reality. Words will be insufficient to thank all the students for their truthful effort.

I hope this issue of Digit-All has all the flavors in it that were promised by the previous and it helps enlighten your mind with new fun and facts that we have tried to add in the ever growing content.

Thanks & Regards,

Jagannath Ray

Gandhi Institute For Technology, Bhubaneswar.

From the Student Editor's Desk

Dear Friends

With a high-spirited heart and mind, I welcome my friends to Digit-All. I feel much honored to be a Student Editor. However, doing the job well is not to be taken lightly. My role is not only to bring a student perspective to co-editing the journal; I am also involved in trying to increase student participation, and I must say that the overwhelming responses from my friends and juniors were indeed pleasing.

The magazine has provided a platform and has inspired all to represent themselves with their ideas and innovative thoughts. When just a reader, I was inspired to search in the net for different subjects that I went through in the articles and facts. Being an editor, I hope this issue has the same effect on my friends.

All of the work I have done so far has provided me with invaluable experience that will undoubtedly serve me well in my future career. I hope that the prospect of becoming Student Editor of such an exciting and groundbreaking magazine will inspire other students to become involved.

Thanks and Regards

Vikrant Rathaur

Student, Dept. of CSE (7th Semester)

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Articles

NEUROCHIPS for animal control

By: Julee Rani
Student, 2nd year, Dept. of CSE

Neurobiologists have used computers for simulation, data collection and data analysis but not to interact directly with nerve tissue in live, behaving animals. Although digital computers and nerve tissue both use voltage waveforms to transmit and process information, engineers and neurobiologists have yet to cohesively link the electronic signaling of digital computers with the electronic signaling of nerve tissues in freely behaving animals.

Advances in micro electro mechanical systems(MEMS), CMOS electronics and embedded computer systems will finally let us link computer circuitry to neural cells in live animals and in particular, to identifiable cells with specific, known neural functions. The key components of such a brain computer system include neural probes, analog electronics and a miniature microcomputer. Researchers developing neural probes such as sub-micron MEMS probes, micro clamp, microprobe arrays and similar structures can now penetrate and make electrical contact with nerve cells without causing significant or long-term damage to probes or cells.

Researchers developing analog electronics such as low power amplifiers and analog to digital converters can now integrate these devices with micro controllers on a single low power CMOS die. Further, researchers developing embedded computer systems can now incorporate all the core circuitry of a modern computer on a single silicon chip that can run on miniscule power from a tiny watch battery. In short, engineers have all the pieces they need to build truly autonomous implantable computer systems. Until now, high signals recording as well as digital processing of real time neuronal signals have been possible only in constrained laboratory experiments.

By combining MEMS probes with analog electronics and modern CMOS computing into self- contained, implantable Microsystems, implantable computers will free neuroscientists from the lab bench.

2 Things that will disturb you!

By: Subhrajyoti Sahoo
Student, 4th year, Dept. of CSE

IBM and Hitler

IBM and the Holocaust is the stunning story of IBM's strategic alliance with Nazi Germany -- beginning in 1933 in the first weeks that Hitler came to power and continuing well into World War II. As the Third Reich embarked upon its plan of conquest and genocide, IBM and its subsidiaries helped create enabling technologies step-by-step, from the identification and cataloging programs of the 1930s to the selections of the 1940s.

Only after Jews were identified -- a massive and complex task that Hitler wanted done immediately -- could they be targeted for efficient asset confiscation, ghettoization, deportation, enslaved labor, and, ultimately, annihilation. It was a cross-tabulation and organizational challenge so monumental, it called for a computer. Of course, in the 1930s no computer existed.

But IBM's Hollerith punch card technology did exist. Aided by the company's custom-designed and constantly updated Hollerith systems, Hitler was able to automate his persecution of the Jews. Historians have always been amazed at the speed and accuracy with which the Nazis were able to identify and locate European Jewry. Until now, the pieces of this puzzle have never been fully assembled. The fact is, IBM technology was used to organize nearly everything in Germany and then Nazi Europe, from the identification of the Jews in censuses, registrations, and ancestral tracing programs to the running of railroads and organizing of concentration camp slave labor.

IBM and its German subsidiary custom-designed complex solutions one by one, anticipating the Reich's needs. They did not merely sell the machines and walk away. Instead, IBM leased these machines for high fees and became the sole source of the billions of punch cards Hitler needed.

IBM and the Holocaust take you through the carefully crafted corporate collusion with the Third Reich, as well as the structured deniability of oral agreements, undated letters,

and the Geneva intermediaries – all undertaken as the newspapers blazed with accounts of persecution and destruction.

Just as compelling is the human drama of one of our century's greatest minds, IBM founder Thomas Watson, who cooperated with the Nazis for the sake of profit.

Only with IBM's technologic assistance was Hitler able to achieve the staggering numbers of the Holocaust. Edwin Black has now uncovered one of the last great mysteries of Germany's war against the Jews -- how did Hitler got the names?

source:-http://www.ibmandtheholocaust.com/

Indian Intelligence Have U.S. Government Passwords, Hackers Claim

The Indian hacker group that released Symantec anti-virus source code earlier this month now says it has more proof that Indian intelligence agencies are spying on the U.S. government.

Infosec Island's Anthony M. Freed posted an article saying one of the Indian hackers, who call himself "YamaTough," gave him 68 sets of usernames and passwords for U.S. government network accounts.

YamaTough told Freed the account data is just a sample of the information the hacker group, the "Lords of Dharmaraja," copied from Indian government servers.

"In the best interest of the federal, state and local municipalities and their constituents, Infosec Island will not publish the compromised account data," Freed wrote. "We have provided the information to the proper authorities and are fully cooperating with law enforcement."

Last week, the Lords of Dharmaraja publicly posted purported internal Indian military intelligence memos that said Apple, Nokia and BlackBerry maker Research In Motion (RIM) had given India "backdoors" – secret keys to unlock encrypted communications sent and received by users of their handsets.

As a possible demonstration of the viability of those backdoors, the memos also included transcripts of emails between members of the U.S.-China Economic and Security Review Commission (USCC), a congressional commission that analyzes and reports on bilateral American-Chinese relations. The memos said information revealed in the emails had resulted in Indian naval-intelligence operatives being sent to China.

Reuters said it got hold of a larger set of USCC emails, which it showed to two Indian security experts with ties to India's government and two unnamed Americans "close to" the USCC. All four dismissed the memos as hoaxes possibly concocted by China or India's arch-rival Pakistan.

Other Washington insiders told Reuters the memos seemed genuine.

Asked about the Lord of Dharmaraja's motives, YamaTough responded with a strikingly pro-American agenda.

"My team is pro US, we fight for rights in our country we are not intentionally harm US companies," Freed quoted him as writing. "Our mission - exposure of the corruption."

"We do not approve sharing personal data and source codes with foreign governments," YamaTough added. "We want free and nice India and not police state."

YamaTough also said the Lords of Dharmaraja may soon release more data from companies other than Symantec found on Indian government servers.

India and China have had tense relations for more than half a century, fought a month-long border war in 1962 and are currently jockeying for position as Asia's pre-eminent regional power.

Since the end of the Cold War, during which India had close ties to the Soviet Union, U.S.-Indian relations have warmed almost as rapidly as the U.S.-Chinese relationship has chilled.

But attempts to formalize a U.S.-India alliance have been opposed by nationalists and leftists in India's governing coalition, as well as by the U.S.'s longtime ally Pakistan.

source:- http://www.foxnews.com/tech/2012/01/12/indian-intelligence-have-us-government-passwords-hackers-claim/

up'date

- Members of Information Science and Application Society, GIFT organized a seminar dated 13th Sept. on the topic "Pointers in C" followed by a programming contest. This program was headed by Mr. Susant Kumar Rout (LIT,Bhubaneswar).

White Hat Hackers

By: Sandeep Ohdar
Student, 2nd Year, Dept. of CSE

Hackers that use their skills for good are classified as "white hat." These white hats often work as certified "Ethical Hackers," hired by companies to test the integrity of their systems.

SOME OF THE WHITE HACKERS ARE:

1. Stephen Wozniak

- STEPHEN WOZNIAK and STEVE JOBS co-founded APPLE computer.
- He has been awarded with the National Medal of Technology as well as honorary doctorates from Kettering University and Nova South eastern University. And also inducted into the National inventors Hall of Fame in September 2000.
- Woz got his start in hacking making blue boxes, devices that bypass telephone-switching mechanisms to make free long-distance calls.
- Wozniak and Jobs sold the first 100 of the Apple I to a local dealer for $666.66 each.

2. **Tim Berners-Lee**

- Berners-Lee is famed as the inventor of the World Wide Web, the system that we use to access sites, documents and files on the Internet. .
- He built his first computer with a soldering iron, TTL gates, an M6800 processor and an old television.
- Berners-Lee created a hypertext prototype system that helped researchers share and update information easily.
- Berners-Lee is the director of the World Wide Web Consortium (W3C), which oversees the Web's continued development

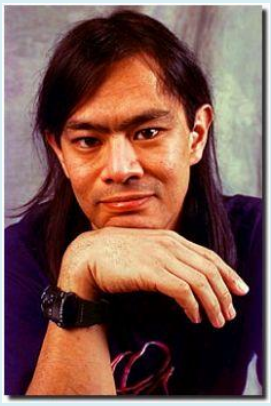
3. **Linus Torvalds**

- Torvalds is the father of The Linux, the very popular Unix-based operating system.
- Torvalds created the Linux kernel in 1991, using the Minix operating system as inspiration.
- Only about 2 percent of the current Linux kernel is written by Torvalds himself.
- He has had an asteroid named after him and received honorary doctorates from Stockholm University and University of Helsinki.
- He is also the recipient of the 2014 IEEE Computer Society Computer Pioneer Award.

4. **Richard Stallman**

- He's known as the father of free software.
- He was a critic of restricted computer access in the lab. When a password system was installed, Stallman broke it down.
- He works against movements like Digital Rights Management (or as he prefers, Digital Restrictions Management) through organizations like Free Software Foundation and League for Programming Freedom.

5. **Tsutomu Shimomura**



- He has came to fame by helping FBI in catching THE KEVIN METTNIK
- Shimomura pinpointed Mitnick's location using backtracking of mittnik,s cellular location.
- Shimomura wrote a book about the incident with journalist John Markoff, which was later turned into a movie.

up'date

Pinaki Sarangi, a student of IT Dept. 4th year, won the programming contest held on 13th sept 2014.

Interesting Facts

By: Ms. Juhi Agarwal
3rd Year Student, Dept. of CSE

- In 1978, Apple Corps (owned by The Beatles) sued Apple Computer for trademark infringement. The case settled for $80,000 along with the condition that Apple Computer should not enter the music business, and Apple Corps agreed not to enter the computer business.
- The Motion Picture Academy refused to nominate Tron (1982) for a special-effects award because, according to director Steven Lisberger, "The Academy thought we cheated by using computers"
- John Lasseter (CEO of Pixar) was fired from Disney for promoting computer animation
- Illegal prime numbers exist. An illegal prime is a prime number that represents information which is forbidden to possess or distribute. For example, when interpreted in a particular way, a certain prime describes a computer program that bypasses the digital rights management scheme used on DVDs
- The new Texas Instrument calculators have ABC keyboards because if they had QWERTY keyboards, they would be considered computers and wouldn't be allowed for standardized test taking
- 40-55% of all Wikipedia vandalism is caught by a single computer program with 90% accuracy
- Three students from a school in Nevada had installed keystroke loggers on their teachers' computers to intercept the teachers' usernames and passwords, and then charged other students up to $300 to hack in and increase their grades.
- In 1936, the Russians made a computer that ran on water
- Tandy TRS-80 Model I computer radiated so much interference that many games were designed so that an AM radio next to the computer could be used to provide sounds.

Cartoons

By: Mr. Md Ali Sehensha
4th Year Student, Dept. of CSE

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CSI- GIFT Student Chapter was inaugurated in the presence of Prof. Dr. Anirban Basu (Chairman, CSI Division-V), Prof. Dr R.N. Satpathy (Regional Students co-coordinator, CSI) and Mr. Sanjay Mohapatra (Hony. Secretary, CSI).

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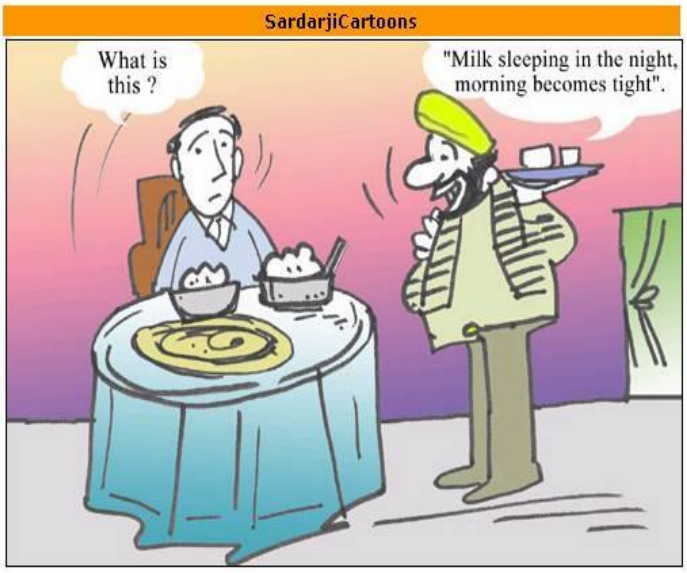
A 2 days workshop- "Robotics Authority" was organized on 19th and 20th September 2014 by Robotics club in collaboration with ISA Society.



Technical Quiz

BY: Ms. Suman Sinha
3rd Year Student, Dept. of CSE

- *What layer of OSI determines the interface of the system with the user?*

A. Session
B. Data-link
C. Application
D. Network

- *Page stealing*

A. is a sign of an efficient system
B. is taking page frames from other working sets
C. should be the tuning goal
D. is taking larger disk spaces for pages paged out

- *In MS-DOS 5.0, which is the number that acts as a code to uniquely identify the software product?*

A. MS
B. DOS
C. MS DOS
D. 5.0

- *Topically, how many type* III PC *cards can you insert in a laptop*

A. 1
B. 2
C. 3
D. 4

- *What is the first thing you could do to check for damage to a printer after receiving it?*

A. Run MSD diagnostics
B. Attach it to a PC and print something
C. Check the cables
D. UN-box it and examines it for physical damage

- *While working with MS-DOS, which command is used to restore files those were backed up using the BACKUP command?*

A. COPY
B. DISKCOPY
C. RESTORE
D. STORE

- *The term TSR is an abbreviation for:*

A. Terminate Stay Ready
B. Testing System Read
C. Terminal Still Ready
D. Terminate Stay Resident

- *The _____ command allows you to modify the default prompt to provide other information*

A. prompt
B. windows
C. cursor
D. click

- *The list of coded instructions is called*

A. Computer program
B. Algorithm
C. Flowchart
D. Utility programs

- *The average time necessary for the correct sector of a disk to arrive at the read write head is _____*

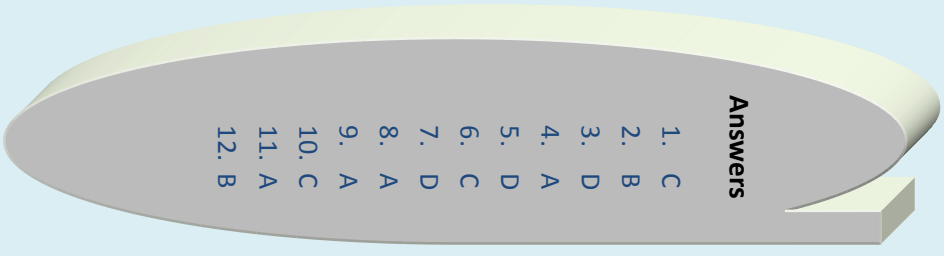
A. Down time
B. Seek time
C. Rotational delay
D. Access time

- *How many digits of the DNIC (Data Network Identification Code) identify the country?*

A. First three
B. First four
C. First five
D. First six

- *Frames from one LAN can be transmitted to another LAN via the device*

A. Router
B. Bridge
C. Repeater
D. Modem



POETRY

BY: Ms. Nishi Ranjana
2nd Year Student, Dept. of IT

WINDOWS???

Yesterday it worked.
Today it isn't, Windows is like that!
You seek a website,
It can't be located, Countless more exist!
The crush reduces your expensive computer,
To a simple stone!
Out of memory.
We wish to hold the whole sky, but we never will!
Having been erased,
The document you are seeking must now be retyped!
Serious error, all shortcuts disappeared= mind and screen, both blank!
Printer not ready, Could be a fatal error, Have a pen handy!
Error has occurred, we won't tell you where and why, Lazy programmers!
Login incorrect, only perfect spellers may enter the system!
Bill say's "To have no errors, would be life without meanings."
No struggle😐, no joy ☺.There is a chasm of carbon and silicon, the software can't bridge.