

# DIGIT-ALL

Dept. of Computer Science and Engineering,  
Gandhi Institute For Technology Bhubaneswar

January 2013

Vol.3 Issue:1



## 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.

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## *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 Principal's desk:



Dear Readers,

*Greetings from Gandhi Institute For Technology!*

We at the Gandhi Institute for Technology have always been focused on our goal of achieving the heights of the sky taking along with us the rest of the world. All the co-curricular activities taken forward by the students and the teachers is aimed at just one target of overall development of the students, DIGIT ALL being one of them.

DIGIT ALL being a half yearly magazine of GIFT from the school of computer science and engineering has and will continue to help the students to relate themselves as well as share their ideas with their teachers and with the environment in which they are studying in the college.

With utmost pleasure in my heart, I bring before you the third volume of DIGIT ALL.

Thanking everyone involved in this journey so far is just a humble approach from my side towards expressing my gratitude for giving me this moment and making me feel proud to be a GIFTIAN.

Thanks & Regards,

Prof.(Dr) Trilochana Sahu

Principal, Gandhi Institute For Technology, Bhubaneswar.

## FROM THE *Editor's Desk*



Dear Readers,

Welcome to DIGIT-ALL. I would however take this opportunity to thank all the faculties of CSE Department and all our fellow students for their contributions and support throughout the whole journey. The key has been simple yet challenging to share information that is likely of interest to a reasonable segment.

Over the past few months, people have asked me my motivation behind this e-magazine. The short answer is the knowledge I gain from this journey. The magazine has been a platform for the students to exhibit their work which they have done exceedingly well to have surprised us with their depth in different spheres. Today, I can say that we are on course of achieving the purpose of DIGIT-ALL that is to spread knowledge in a fun way.

Again I applaud our effort so far and expect the same enthusiasm in contribution for the coming years from one and all.

Thanks and Regards

Prof. Sitanath Biswas

Dept. of CSE, G.I.F.T

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### ✦ *Ensure Your Safety with Control Cards*

**By: Smruti Ranjan Swain**  
**Asst. Prof, Dept. of CSE**

Getting an easy access to an organization was easier few times back but with passing day the security of individuals is deepening up the present scenario. There is no security of the human being thus the organizations have started ordering access control cards for the safety of their employees and the organization itself. The system of having card entry system is increasing so that the unauthorized access can be prevented. In areas such as office buildings, warehouses, auditoriums, condominiums they are used. With the help of it the organization can remove away the problem that the unauthorized key usage is trying to create problem; for example if incase it was stolen, lost or copied.

These access cards have unique number coded inside it that which can be deleted from your system if it is stolen or lost. It was not much in practice since many of the organizations felt need of it. Only Military personnel used to carry such cards in earlier times but today it has wide spread use within the premises of residential buildings, where there are many crowds such as Airports and companies holding business of small scale and large scale. When the card is touched in the card reader machine the information of the respected user is stored in that machine for almost three years. When the access is granted to the user the logged in information stays in the database. The activity of handling the door allow you to have control over it and it also detects that who entered the premised and finds out the time what was the time when that person entered. Same is the case with the proxy cards, these cards can be automated as they are different from others.

Some have partial access to only foremost entrance during business hours, others use it to unlock safes, and to held server rooms. System can be entrenched in elevators where cardholders do not have right of entry to some of the certain floors. So, office workers or those who resides within the apartment make use of the elevator that can be accessed only to the floor that they are living or work on. Access control cards can be planned according to the time zones, where user is provided few days and hours to enter premises.

The head of the section or manager at any time can adjust card-holder's consents and entry limits on his or her account. They can choose whether to allow entry to premises, allow only at definite time or it is also possible that they do not allow at all. So, isn't it interesting? Make your organizations to purchase this security device and ensure your safety.

## *The New ZWCAD*

**By: Smruti Smraki Sarangi**  
**Asst. Prof., Dept. of CSE**

**N**ow, you are given the ability to fill templates, custom fields and sheet sets with data from drawings which automatically update. ZWSOFT <http://www.zwsoft.com/> has incorporated 'field text' into their latest version of ZWCAD.

When using field data as part of a sheet set in drawing, you will be in control of nearly all aspects of how users make and manage drawings in the life cycle of a project. Commands are accessible by entering Field at the command prompt or by choosing Insert Field found at the Insert menu. The ZWCAD field command can be used in extracting and presenting data from drawing files as the text fields.

The fields can be embedded in tables, mtext, attribute definitions and others. For instance, when using text in the drawing over again, like the current date, the name and address of your company and the initials of the drafter, you will be able to save time while improving accuracy by having the data placed as fields with the Field command. You need not to be memorizing or remembering the data since when the values are changed or updated, ZWCAD will automatically change the text in an instant.

At any phase of the drawing, you can change the drawing properties including the text style and text height through the drawing properties creating the custom properties. If in case you can't find the custom field content which comes with ZWCAD, you will be able to add custom field through the Custom Tab of Drawing Properties dialog box. Such custom fields can be used then in other parts of the drawing through fields.

In the ZWCAD drawings, there is gray colored background in field text which is a visual sign that the text is actually a field and the gray background is not printable. After the drawing has been customized with fields, you will be able to save it as DWR template drawing then make it available for other drawings based on the template. So how do you change text to fields? First, you should double click the text in order for you to edit it and from the formatting toolbar, choose the Insert Field button. This will bring up the Field dialog box from where you can choose the options and categories to add fields into the text. In the same way, you can CAD software use AttDef command in creating an attribute definition that is made of fields. This can be accomplished via the Default Text item of the Attribute Definition CAD free download dialog box. Even if the attribute is consisting of a field, you can override still the automatic value of the field. Such example of this is the date of the title box of the drawing. You can use the field which reports the current date.



However, you might decide freezing it to fixed date whenever needed. The new features added into the latest version of ZWCAD means you can save more time that you can otherwise use on other things that may be needed to produce an effective and impressive drawing.

## *GhostShell university hack: By the numbers*

**By: Chinmaynanda Padhi**  
**Asst. Prof., Dept. of CSE**

**C**ometh the day October 02 2012, hacktivist group GhostShell claimed to have breached 100 top university servers, releasing 120,000 records. But how much information was sensitive? Records stolen from university databases including the University of Michigan, New York University, Princeton and Harvard were made publicly available yesterday, after hacker group leader 'DeadMellox' tweeted a link to the release posted on Pastebin.

The group claimed to have released just a fraction of what they managed to obtain in campaign "Project WestWind", but it still apparently amounted to 120,000 sets of data. Identity finder analyzed the SQL breach, and found that the 120,000 records -- now available publicly in a number of cyber lockers and mirror sites -- appear to be "authentic enough" to warrant university investigation. The data analysis discovered that 36,623 unique email addresses and tens of thousands of student, faculty, and staff names were disclosed.

In addition, thousands of usernames, hashed and plain-text passwords, addresses, phone numbers and database schema information can be found within the releases.

Sensitive information including dates of birth, citizenship, ethnicity, marital status and gender is also included. Luckily for the universities, only one bank account number could be found -- and no credit card information or social security numbers were contained within the release.

"Based upon a casual sampling of time stamps in the data set, it appears that the hackers spent at least four months aggregating the information prior to release," explained Aaron Titus, Chief Privacy Officer for Identity Finder. "Although the hackers claim to have posted 120,000 accounts, Identity Finder could only confirm around 40,000 accounts exposed. 40,000 accounts is still a large number, and it is possible that the hackers had access to far more."

GhostShell has cited tuition fees, political agendas, tough teaching regulations and job uncertainty for graduates as reasons for the campaign.

## up'date

- ✚ Prof. (DR) Sujata Dash published a paper titled "Rough Set Aided Gene Selection for Cancer Classification" at 7th International Conference on Computer Sciences and Convergence Information Technology in December 2012 and published in IEEE Xplore.

## Words of Wisdom

Treat your password like your toothbrush. Don't let anybody else use it, and get a new one every six months.

- Clifford Stoll

The real danger is not that computers will begin to think like men, but that men will begin to think like computers.

- Sydney J. Harris

## ✦ *Your Help Needed to Study Andromeda Galaxy*

**By: Gaurav Sahu**  
**Student, Dept. of CSE**

A group of astronomers is inviting the public to join their star-hunting team in a search of the bright Andromeda Galaxy. The project aims to identify star clusters in our neighboring galaxy, also known as M31. All it takes to find the clusters in Andromeda is an Internet-enabled computer and a desire to help, said Anil Seth, the team's lead investigator. "No special training is required," he said. The so-called "Andromeda Project," which began Wednesday (Dec. 5), will generate the largest sample of clusters from a single spiral galaxy when it is completed. Scientists expect the project could identify 2,500 new star clusters when finished. This would provide useful goalposts to chart how the galaxy, which is on a collision course with the Milky Way, formed and evolved. "The general benefit is to better understand how spiral galaxies form," said Seth, an assistant professor of physics and astronomy at the University of Utah. "Andromeda is the nearest example of a spiral] galaxy, except for the Milky Way," he said. "We can study in detail things we can't see in larger distances."

Seth's team is using images from the Panchromatic Hubble Andromeda Treasury (PHAT), which will generate pictures of a third of the galaxy when the survey is completed next summer. The massive project is taking up two months of Hubble Space Telescope time, making it one of the largest surveys completed by the telescope. Around 20 institutions are involved with many different science goals; Seth's group has one of the projects. At first, Seth's team manually identified 600 clusters in 20 percent of the images that had been taken so far. The process took months. They aimed to automate the rest of the search using a computer program. But when the team asked the software to do the same thing, difficulties arose. Now we know that the background of the galaxy varies behind the star clusters.

Hence this made it difficult for an automated program to do the job. "We couldn't get to the point where we could pick out a large number of clusters we identified by eye," Seth said. "There were thousands of candidates that weren't real clusters." Around this time, the Zooniverse website caught wind of Seth's work and proposed a different approach: crowd sourcing the images. Zooniverse has several successful projects under its umbrella, including Galaxy Zoo, an effort to classify galaxies observed by Hubble and the Sloan Digital Sky Survey. Crowd sourcing was a new idea for most of the science team, but Seth said members enthusiastically embraced the idea. They spent half a year preparing some 12,000 images for public consumption, and hope to generate 50 to 100 views on each image by the summer of 2013.

Scientists have several methods to double-check the public's accuracy. These include inserting synthetic star clusters into the images as a test, as well as recycling several of the pictures the astronomers analyzed themselves. With the information that comes out of this project, the team expects it can begin to answer two major questions about Andromeda: the age of the star clusters, and how stars formed within the galaxy. "Clusters are good objects to study the formation history [of Andromeda] because they're all born at the same time," Seth said. "Rather than having a single star, we have hundreds of thousands of stars we try [identifying] because they're all the same age. We have a better handle on the age of objects."

More star cluster work is already on tap with the PHAT imagery. Seth's team has picked out Hubble images to analyze for information about how fast stars and clusters are moving. For that work, the team is using the W.M. Keck Observatory in Mauna Kea, Hawaii as well as the MMT Observatory near Tucson, Arizona. Seth estimated they have analyzed the spectra of more than 10,000 stars from PHAT. Collaborators on the Andromeda Project include several American universities, Chicago's Adler Planetarium, Oxford University and the European Space Agency.

## Interesting Facts

**By: Mr. Jasmine Choudhury**  
**Student, Dept. of CSE**

- Over 6,000 new computer viruses are released every month.
- The first computer mouse, constructed in 1964, was made out of wood.(by Doug Engelbart)
- The average human being blinks 20 times a minute – but only 7 times a minute when using a computer.
  - 4) The first electro-mechanical computer was developed in 1939.
- By the end of 2012 there will be 17 billion devices connected to the internet.
- 5 out of every 6 internet pages are porn related.
- Over 1 million domain names are registered every month.
- With its 800 million internet users, Facebook would be the third largest country in the World.

### up'date

- ✚ Rajnee Kumari, in the guidance of Prof. Sitanath Biswas and Prof. Subrat Pattanaik published a research paper on "Achieving Fast Recovery in IP Network by Multiple Routing Configuration" in an International journal IJCSIT.

### proverbios

- ✚ "If at first you don't succeed; call it version 1.0"
- ✚ "Programmers are tools for converting caffeine into code."
- ✚ "Windows Vista: It's like upgrading from Bill Clinton to George W. Bush."
- ✚ "The more I C, the less I see."
- ✚ "Unix is user-friendly. It's just very selective about who its friends are."

## Cartoons

By: Mr. Mrinal Kumar Singh  
Student, Dept. of CSE



### up'date

- ✚ Shailendra Gupta, awarded by World Chess Champion, Grandmaster Viswanathan Anand for Academic Excellence on 22ND, July 2012
- ✚ GIFTIAN Syed Azad Ali, won second prize in Robotics event held at IIT MADRAS.
- ✚ Organized an workshop by NABARD,BBSR and ED Cell, GIFT for SFG members on 9th September,2012

## Technical Quiz

By: Mr. Komal Joshi  
Student, Dept. of CSE

❖ Which part interprets program instructions and initiate control operations?

- A. Input
- B. Storage unit
- C. Logic unit
- D. Control unit
- E. None of the above

❖ The binary system uses powers of

- A. 2
- B. 10
- C. 8
- D. 16
- E. None of the above

❖ Which standard govern parallel communications?

- A. RS232
- B. RS-232a
- C. CAT 5
- D. IEEE 1284
- E. None of the above

❖ In laser printer technology, what happens during the conditioning stage?

- A. The corona wire places a uniform positive charge on the paper
- B. A uniform negative charge is placed on the photosensitive drum
- C. A uniform negative charge is placed on the toner
- D. All of the above
- E. None of the above

❖ Which of the following is used for modulation and demodulation?

- A. modem
- B. protocols
- C. gateway
- D. multiplexer
- E. None of the above

❖ Which of the following is not a disadvantage of wireless LAN?

- A. Slower data transmission
- B. higher error rate
- C. interference of transmissions from different computers
- D. All of the above

❖ *The Storage-to-Storage instructions*

- A. have both their operands in the main store.
- B. which perform an operation on a register operand and an operand which is located in the main store, generally leaving the result in the register, except in the case of store operation when it is also written into the specified storage location.
- C. which perform indicated operations on two fast registers of the machine and have the result in one of the registers
- D. all of the above

❖ *The LRU algorithm*

- A. pages out pages that have been used recently
- B. pages out pages that have not been used recently
- C. pages out pages that have been least used recently
- D. pages out the first page in a given area
- E. None of the above

❖ *In SQL, which command is used to make permanent changes made by statements issue since the beginning of a transaction?*

- A. ZIP
- B. PACK
- C. COMMIT
- D. SAVE
- E. None of the above

❖ *Periodically adding, changing and deleting file records is called file*

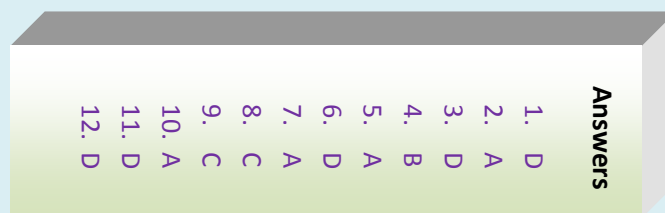
- A. Updating
- B. upgrading
- C. restructuring
- D. renewing
- E. None of the above

❖ *What service is used to translate domain names to IP addresses?*

- A. NFS
- B. SMB
- C. NIS
- D. DNS
- E. None of the above

❖ *Which of the following command is used to create a Linux installation hoot floppy?*

- A. mkboot disk
- B. bootfp disk
- C. ww and rawwrite
- D. dd and rawrite
- E. None of the above





## POETRY

**By: Mr. Anuj Kumar Rohit**  
**Student, Dept. of CSE**

### **Friend**

The day I started to walk,  
I can never forget the past.  
The day I started to learn,  
I can never forget the fun.  
The day I met a friend,  
I learnt what life can become.  
And when life asked me "what do you have"?  
I said I have a friend,  
Who would remember me when I am past.

## SAPPENINGS

- ❖ Society Day – ISAS: Robotics model presentation and Paper presentation. An Inter-college competition on Robotics to be held in March 2013.
- ❖ Seminar on "Android Application": Introduction to Android and its Application Development frame work and their scope

# The End