Dr. N.G.P ARTS AND SCIENCE COLLEGE

An Autonomous Institution Affiliated to Bharathiar University
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COIMBATORE - 641 048

News Letter 2016 - 2017

DEPARTMENT OF COMPUTER TECHNOLOGY
COMPUTER INFORMATICS

Editorial

It is our immense pleasure to bring out the newsletter for this academic year 2016 - 2017. In the age of knowledge explosion in computer technology & related disciplines this publication will be a good platform for knowledge sharing among students community. This documentation of activities and achievements will be real inspirations for the faculty and students. This portfolio of activities will stimulate a healthy growth among the department for the overall effectiveness of the Institution. Our editorial board place on record, our gratitude to our Chairman, Secretary and Principal for their support and co-operation.

ABOUT US

The Department of Computer Technology was started in the academic year 2008-2009 with an intake of 50 students and 2 staff members. At present the total number of students are 336 and members of staff are 11. Computer Technology is the study of Theoretical foundations of information, computation, their implementation and application in computer systems.

ASSOCIATION ACTIVITIES

As a part of the academic activities the association of our department CYBER DYNERZ organized 3 Invited Talks, 3 Workshops, 1 hands on training, 2 Alumni Interaction Programmes, Interdepartmental Meet (TECHBEAT'2016), a Technical Expo (TECH EXPO'2016), National Level Technical Symposium (CYBERTRON '2017), 1 Extension activity and 1 Student Development Programme .

Guest Lectures:

1. "Animation Techniques" by Mrs.Lavanaya, Arena Animation on 23.06.2016.

2. "IT Career and its Current Technologies" by Mr. Aravindhan, CEO, Cluster Group of Companies, Coimbatore on 22.08.2016.

3. "How to prepare TNPSC, UPSC and other competitive examination" by Mr. S.Sujith Kumar, Manager, Benevolent Academy, on 08.09.2016.

Workshop :

1. "PHP & MySQL" by Mr.Sowrimalaiyan, Senior Consultant, Surya Tech Solution on 23.06.2016 and 24.06.2016.

2. ".NET Framework" by Mr. P. Manirathnam, Senior Software Engineer, NEXT Logic Software Solutions, Coimbatore on 21.07.2016, 25.07.2016 and 26.07.2016.

3. "Digital Marketing" by Mr. M. Subash Chandran,Founder and CEO, Discover Geeks, Coimbatore on 08.09.2016.

National Level Technical Symposium :

1. "CYBERTRON'16" inaugurated by Dr.R.Rajan, Inspector of Police Coimbatore on 09.02.2017.

Inter Department Meet :

1. Inter Department Competition TECHBEAT'16 and Intra Department Technical Expo TECH EXPO'16 has been conducted on 14.07.2016.

Extension Activity :

1. Student extended their services in creating "Awareness on Cashless Transactions" for the public in Kalapatti, Veeriyampalayam , Karupparayampalayam on 07.01.2017

Student Achievements :

Around 60 Students from I year, II Year and III Year of the department participated in various technical and non-technical events in and around Dr.NGP Arts and Science College, and won 8 SOLO CREDITS and 32 TEAM CREDITS.

Student Corner

Computer Vision Syndrome :

Computer vision syndrome (CVS) is a condition resulting from focusing the eyes on a computer or other display device for protracted, uninterrupted periods of time.

Symptoms:

1. Blurred Vision

2. Double Vision

3. Dry, red eyes

4. Eye Irritation

5. Head aches

6. Neck/Back pain

A few simple changes to your workspace can prevent the new problems:

Cut the Glare: Change the lighting around you to reduce the effect on your computer screen. If light from a nearby window casts a glare, move your monitor and close the shades.

Rearrange your desk. The best position for your monitor is slightly below eye level, about 20 to 28 inches away from your face.

Give your eyes a break. Follow the 20-20-20 rule. Look away from the screen every 20 minutes or so and look at something around 20 feet away for about 20 seconds. Blink often to keep your eyes moist. If they feel dry, try some eye drops.

Tweak your settings. Adjust the brightness, contrast, and font size until you find what's best for you.

Manigandan
I B.Sc CT - A

Ruby Programming Language :

Ruby is a dynamic, reflective, object-oriented, general-purpose programming language. It was designed and developed in the mid -1990s by Yukihiro "Matz" Matsumoto in Japan. According to its creator, Ruby was influenced by Perl, Smalltalk, Eiffel, Ada, and Lisp.

The name "Ruby" originated during an online chat session between Matsumoto and Keiju Ishitsuka on February 24, 1993. Initially two names were proposed: "Coral" and "Ruby". Matsumoto chose the latter in a later e-mail to Ishitsuka. Matsumoto later noted a factor in choosing the name "Ruby" - it was the birthstone of one of his colleagues.

The first public release of Ruby 0.95 was announced on Japanese domestic newsgroups on December 21, 1995.Following the release of Ruby 0.95 in 1995, several stable versions of Ruby were released in the following years:

⟶ Ruby 1.0: December 25, 1996

⟶ Ruby 1.2: December 1998

⟶ Ruby 1.4: August 1999

⟶ Ruby 1.6: September 2000

Features:

⟶ Thoroughly object-oriented with inheritance, mixins and metaclasses

⟶ Dynamic typing and duck typing

⟶ Succinct and flexible syntax

- Dynamic reflection and alteration of objects to facilitate metaprogramming

- Lexical closures, iterators and generators, with a block syntax

- Literal notation for arrays, hashes, regular expressions and symbols

- Embedding code in strings (interpolation)

- Default arguments

- Four levels of variable scope

- Exception handling and Operator overloading

- Custom dispatch behavior (through method_missing and const_missing)

- Native plug-in API in C

- Interactive Ruby Shell (a REPL)

- Centralized package management through RubyGems

G.Sanjai

III B.Sc CT - B

GOOGLE GLASS

Google Glass is an optical head-mounted display designed in the shape of a pair of eyeglasses. It was developed by X (previously Google X) with the mission of producing a ubiquitous computer. Google Glass displayed information in a smartphone-like hands-free format. Wearers communicated with the Internet via natural language voice commands.

Features :

- Touchpad: A touchpad is located on the side of Google Glass, allowing users to control the device by swiping through a timeline-like interface displayed on the screen. Sliding backward shows current events, such as weather, and sliding forward shows past events, such as phone calls, photos, circle updates, etc.

- Camera: Google Glass has the ability to take photos and record 720p HD video.

- Display: The Explorer version of Google Glass uses a liquid crystal on silicon (LcoS)(based on an LcoS chip from Himax), field-sequential color system, LED illuminated display.

Pranav Shailesh

I B.Sc CT - B

ROBOTICS :

Robotics is the interdisciplinary branch of engineering and science that includes mechanical engineering, electrical engineering, computer science, and others. Robotics deals with the design,

construction, operation, and use of robots, as well as computer systems for their control, sensory feedback, and information processing.

Robotic aspects

1. Robots all have some kind of mechanical construction, a frame, form or shape designed to achieve a particular task.

2. Robots have electrical components which power and control the machinery.

3. All robots contain some level of computer programming code.

Applications :

Current and potential applications include:

- Military robots

- It was demonstrated that a robot can perform a herding task.

- Robots are increasingly used in manufacturing (since the 1960s). In the auto industry, they can amount for more than half of the "labor".

- Robots such as HOSPI are used as couriers in hospitals (hospital robot).

- Robots can serve as waiters and cooks, also at home. Robot combat for sport

- Cleanup of contaminated areas, such as toxic waste or nuclear facilities. Agricultural robots (AgRobot).

- Domestic robots, cleaning and caring for the elderly

- Medical robots performing low-invasive surgery

- Household robots with full use.

- Nanorobots

- Swarm robotics

Arul Mozhi

II B.Sc CT-A

Digital marketing (also known as data-driven marketing) is an umbrella term for the marketing of products or services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium.

Digital marketing's development since the 1990s and 2000s has changed the way brands and businesses utilize technology for marketing. As digital platforms are increasingly incorporated into marketing plans and everyday life, and as people use digital devices instead of visiting physical shops, digital marketing campaigns are becoming more prevalent and efficient.

Digital marketing techniques such as search engine optimization (SEO), search engine marketing (SEM), content marketing, influencer marketing, content automation, campaign marketing, data-driven marketing and e-commerce marketing, social media marketing, social media optimization, e-mail direct marketing, display advertising, e-books, and optical disks and games are becoming more common in our advancing technology. In fact, digital marketing now extends to non-Internet channels that provide digital media, such as mobile phones (SMS and MMS), callback, and on-hold mobile ring tones.

Key Features :

1. Ease of access
2. Competitive Advantage
3. Effectiveness

Latest developments and strategies

➡ Segmentation

➡ Influencer marketing

➡ Online behavioral advertising

➡ Data-driven advertising

➡ Remarketing

➡ Game advertising

Ways to further increase the effectiveness of digital marketing

Marketers also find email an effective strategy when it comes to digital marketing as it is another way to build a long term relationship with the consumer. Listed below are some aspects that need to be considered to have an effective digital media campaign and aspects that help create an effective email system.

➡ Interesting mail titles

➡ Establishment of customer exclusivity

➡ Low Technical Requirements

➡ Rewards

Logeswaran
II B.Sc CT - B

ETHICAL HACKING :

Hacking is the act of finding the possible entry points that exist in a computer system or a computer network and finally entering into them. Hacking is usually done to gain unauthorized access to a computer system or a computer network, either to harm the systems or to steal sensitive information available on the computer.

Hacking is usually legal as long as it is being done to find weaknesses in a computer or network system for testing purpose. This sort of hacking is what we call Ethical Hacking.

A computer expert who does the act of hacking is called a "Hacker". Hackers are those who seek knowledge, to understand how systems operate, how they are designed, and then attempt to play with these systems.

Types of Hacking

➡ Website Hacking

➡ Network Hacking

➡ Email Hacking

➡ Ethical Hacking

➡ Password Hacking

➡ Computer Hacking

Here is a list of some probable reasons why people indulge in hacking activities ?

➡ Just for fun

➡ Show-off

➡ Steal important information

➡ Damaging the system

➡ Hampering privacy

➡ Money extortion

➡ System security testing

➡ To break policy compliance

Sunandha
III B.Sc CT - A

Ethical Hacking - Tools

NMAP

Nmap stands for Network Mapper. Nmap uses raw IP packets to determine ?

➡ what hosts are available on the network

➡ what services those hosts are offering

➡ what operating systems they are running on

➡ what type of firewalls are in use, and other such characteristics.

Metasploit

Metasploit is one of the most powerful exploit tools. With Metasploit, you can perform the following operations ?

➡ Conduct basic penetration tests on small networks

➡ Run spot checks on the exploitability of vulnerabilities

➡ Discover the network or import scan data

➡ Browse exploit modules and run individual exploits on hosts

Burp Suit

Burp Suite is a popular platform that is widely used for performing security testing of web applications. Burp is easy to use and provides the administrators full control to combine advanced manual techniques with automation for efficient testing.

Angry IP Scanner

Angry IP scanner is a lightweight, cross-platform IP address and port scanner. It can scan IP addresses in any range. It can be freely copied and used anywhere. Angry IP Scanner can gather any information about scanned Ips.

Cain & Abel

Cain & Abel is a password recovery tool for Microsoft Operating Systems. It helps in easy recovery of various kinds of passwords by employing any of the following methods ?

➡ Sniffing the network

➡ Cracking encrypted passwords using Dictionary, Brute-Force and Cryptanalysis attacks

➡ Recording VoIP conversations

➡ Decoding scrambled passwords

➡ Recovering wireless network keys

➡ Revealing password boxes

C. Subaragasivam
III B.Sc CT- B

SIMPLE TONGUE TWISTERS :

1. Can you can a can as a canner can can a can?

2. To begin to toboggan first buy a toboggan, but don't buy too big a toboggan. Too big a toboggan is too big a toboggan to buy to begin to toboggan.

3. The chic Sikh's sixty-sixth sheep is sick

4. Which witch switched the Swiss wristwatches?

5. She sells seashells by the seashore.

6. Six sick hicks nick six slick bricks with picks and sticks.

7. I wish to wish the wish you wish to wish, but if you wish the wish the witch wishes, I won't wish the wish you wish to wish.

8. Hassock hassock, black spotted hassock. Black spot on a black back of a black spotted hassock.

9. Pete's pa pete poked to the pea patch to pick a peck of peas for the poor pink pig in the pine hole pig-pen.

10. Green glass globes glow greenly.

Nandhini
I B.sc CT-A

10 UP COMING PROGRAMMING LANGUAGES

1. Google Go

Go, also known as golang, was launched in 2009, having been created by three Google employees - Robert Griesemer, Rob Pike, and Ken Thompson - in 2009.

The open source language is viewed as faster and easier to use than more established languages such as Java and C, from which it is derived.

"Go is an attempt to combine the ease of programming of an interpreted, dynamically typed language with the efficiency and safety of a statically typed, compiled language," its creators say.

2. Julia

Julia is described as a "high-level, high-performance dynamic programming language for technical computing".

This makes it good for Hadoop-style parallelism, say its creators, Jeff Bezanson, Stefan Karpinski, Viral Shah, and Alan Edelman.

3.Swift

Swift, revealed at Apple's WWDC conference in 2014, is intended as a replacement for the Objective-C language for OSX and iOS development. Apple made the language open source in December 2015 under the Apache license. That means all of the source code will be available to edit and programs can be made without attributing them to Apple.

Swift - which has similarities to more modern languages like Ruby and Python - has been enjoying "meteoric" growth since launching, according to RedMonk analyst Stephen O'Grady.

"Swift adopts safe programming patterns and adds modern features to make programming easier, more flexible, and more fun," says Apple.

4. Elixir

Elixir is defined as a 'functional, concurrent, general-purpose' programming language. It was created in 2012, builds on top of Erlang and is used for web development and building embedded systems. It is used by companies such as Pinterest, Moz and Inverse.

5. Rust

Created by Mozilla, Rust 1.0 was released in 2014, having been in development for a number of years.

Close in some respects to C and C++, Mozilla describes it as a "new programming language which focuses on performance, parallelization, and memory safety".

"By building a language from scratch and incorporating elements from modern programming language design, the creators of Rust avoid a lot of "baggage" (backward-compatibility requirements) that traditional languages have to deal with."

6. Erlang

Created by developers at Ericsson two decades ago to run its telephone exchanges, Erlang is a relatively simple programming language designed for large, scalable and high-availability applications.

It garnered little attention outside of the telecoms industry since the mid-nineties, but has grown in prominence in recent years, with a number of high profile users. WhatsApp, for example, uses Erlang to handle billions of messages sent across its network each day.

7. Scala

Like Erlang, Scala has been around for slightly longer than most of the other languages featuring on this list. But the functional and object-oriented language - which is highly scalable, hence its name - is continuing to gain ground with well-known organizations.

8. Haskell

Haskell calls itself an 'advanced purely-functional programming language'. Its first specifications were published in 1990. It features a type system with type inference and 'lazy evaluation'. It is mainly used within academia but there are some examples of it being used in industry, for example projects within AT&T, BAE Systems, Facebook and even Google

9. Clojure

Clojure, launched in 2009, is a dialect of the Lisp programming language. It is a general-purpose language which emphasises functional programming. It treats code as data and has a macro system, like other 'Lisps'.

It is successfully used in industry by firms like Walmart, Puppet Labs and various big software firms.

10. Lua

Lua was designed in 1993 as a language for extending software applications for customisation.

Lua, the Portugese word for 'moon', is described as a cross-platform, 'lightweight multi-paradigm' language mainly designed for embedded systems and clients. It is a very popular language among gaming firms and used for Angry Birds and World of Warcraft, to name just two.

CROSSWORD PUZZLE:

ACROSS:

2. A key on the keyboard which moves left and erases whatever is to the left of it.

4. A named location on a page that can be the target of a hyperlink.

7. An error in an application program or a problem with hardware.

8. A program that contains the software instructions necessary to make exact replicas of itself and insert these instructions into other executable programs.

9. The name of the first computer build in 1945

11. Those parts of the computer system that you can see and touch

13. Uniform resource locator

15. A feature that enables you to focus on a larger or smaller part of the worksheet in print review or in some pre-print features

16. Local area network

17. Random access memory

DOWN

5. He is considered the father of computers

6. Co-founder of apple computers

10. Blinking underline, rectangle, box, line or other symbol that marks you place on the screen. It shows you where your next action will take place. This is called an "insertion point".

12. A compact disk on which a large amount of digitized read-only data can be stored

14. File transfer protocol
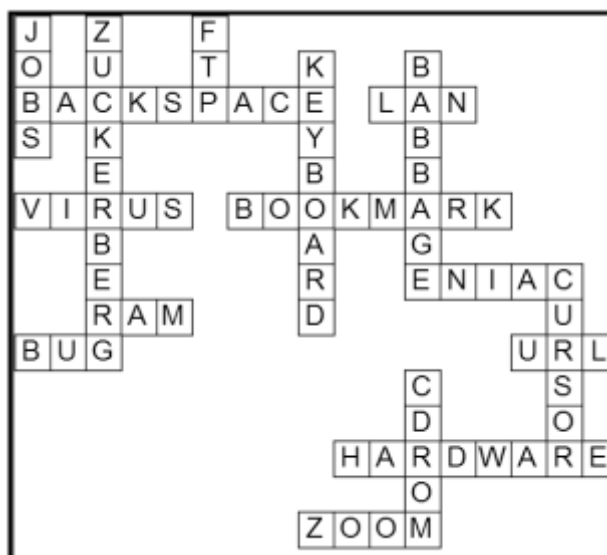
At a glance

Guest Lectures/Workshop Conducted	:	07
Inter-department/Intercollegiate Meet	:	02
Extension Activity	:	01
Students Placed	:	55
Staff Publications	:	07
Student Achievements	:	47

Invited Talk on "IT Career and its Current Technologies"

Extension Activity "Awareness on Cashless Transaction"

TECH EXPO'16

TECH BEAT'16

. NET Framework Workshop

Student Development Programme