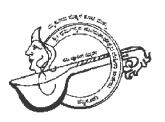
II Om Shree Manjunathaya Namaha II

# MMK & SDM MAHILA MAHAVIDYALAYA

Krishnamurthypuram, Mysore







# Prof. SAINATH MALLIGEMADU Principal

Faculty Editors : Mrs. Rajitha V. Mrs. Jyothilakshmi G. Kava February 2020 Department of Computer Science Issue - 24

Mrs. K.S. SUKRUTHA HOD of Computer Science

Student Editors:
Ms. Kavya Urs, II Sem. BCA
Ms. Poorvaja Urs., II Sem. BCA

# From the Principal's Desk



It is a pleasant task to write a few lines from the Principal's desk by way of summation to the Biannual News Letter of GI Talk published by the Department of Computer Science.

GI Talk gives ample opportunities to students & teachers to showcase their talent and record their achievements. The various activities conducted by the departments, the contributions of the students and teachers show that all are being involved in the development of the institution in a blissful way.

The dissemination of Computer knowledge to other teachers and non teaching staff is remarkable. Teachers' participation in Seminar, Workshop and Paper Presentation and Publication, students' involvement in internship, project work etc. really need appreciation.

For the commitment and involvement of the staff & student, I pray Lord' Manjunatha Swamy and Poojya Heggadeji to bless them in their endeavours. I am always indebted to their blessings.

"Pleasure in the job puts perfection in the work"

-Aristotle

Prof. Sainath Malligemadu Principal

# Message by HOD



At the outset, I would like to thank staff members and the students who have been giving exemplary support and contributions to the department. It gives me great opportunity to present the Twenty Fourth issue of

Bi-Annual news letter "GI Talk". This internal newsletter is one of the ways in which we can disseminate information on the activities of the Department. The News Letter is prepared with the intention of creating a path for the young booming techies to imbibe techno culture in this digital era. The past semester was full of various activities by the students and faculty in academic, co-curricular, extra-curricular as well as research & developments. My special thanks to faculty editors and student editors of the News Letter for bringing out another successful issue with their sincere effort. I express my gratitude to our beloved Principal and also to the Management for their enormous support. Best wishes to all the readers of this Newsletter.

**Smt. K.S. Sukrutha** HOD, Computer Science

# Photo Gallery



Bridge Course on Accounting by Sri. Prashanth Jain to II BCA students



MS -Excel training Programme for Non Teaching Staff Members of the College



Two Days Training Programme for Teaching Staff Members of the College on MS Office



Invited talk on Machine Learning with Data Science to III BCA Students by Mr. Naveen Kumar B S, Chief Operations and Technical Head, Vedha Softech, Mysore.



Faculty Development Programme on Communicating Effectively in Class room - Communication Skills for Teachers at SDM - IMD



"Internet Awareness Programme" for the Students of Sarada Vilas Girls High School, Krishnamurthypuram, Mysuru



Interclass IT Quiz Competition organized by Tech Amateur IT Club



Orientation programme to I B Sc and I BCA students by Smt K S Sukrutha

# **EMPOWERED EDGE**

#### Introduction:

Empowered edge is a term in IT that is used to talk about empowering computing centralization that is distributed toward the edge of a network, toward the end user and the end user device. It is a key concept in device management in the cloud and big data age. Empowered edge is also known as device democracy. It is upcoming technology, undeniable that IOT devices are increasing and there is no end in sight for the data they are producing.

# **Description:**

The idea of empowered edge is that engineers and enterprises are putting more computing transactions and significant data transfers at the edge of an increasingly complex system of network nodes. One of the major challenges of dealing with the internet of things (IOT) is managing a decentralized network. Empowered edge helps to achieve security and efficiency goals.

Empowered edge also works well with the cloud principle - in the cloud computing age, data is continuously being sent to different stakeholders or partners. It makes sense to address the edge of the network as a place where business gets done. In that sense, empowered edge is likely to be more a part of electronic systems and services in the future.

Because of this, the notion of collecting information from sensors and bringing it into one central computing station is no longer scalable or efficient enough for the requirements of today's business. With so many devices producing data, a traditional approach to analytics won't work, but there is a solution execute analytics in distributed servers on-premises and on the edge devices themselves.

It's predicted that through 2028, the embedding of sensor storage, computing and advance AI capabilities in edge devices will steadily increase, and 75% of enterprisegenerated data will be created and processed outside of centralized cloud and data centre's, and relocated to the edge by 2022.

## Advantages:

Low latency.

Real-Time Availability.

Real-Time Data Transmission.

Bring company and customer together.

Consumer perspective it provides a good digital experience.

Productivity increasing.

# **Disadvantages:**

High risk.

No or limited redundancy.





#### Conclusion:

Empowered edge is a key part of digital industrial transformation. The ability to analyze data closer to the source will minimize latency, reduce the load on the internet, improve privacy, security and lower data management costs.

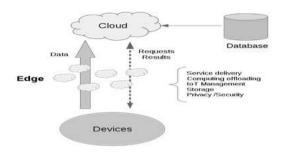
Reference: https://techopedia.com

By: Swathi.R III BCA

# **EDGE COMPUTING**

### Introduction:

Edge computing is the practice of processing data near the edge of your network, where the data is being generated, instead of a centralized data-processing warehouse and is a distributed computing paradigm which brings computation and data storage closer to the location where it is needed, to improve response times and save bandwidth.



- ◆ The increase of IoT devices at the edge of the network is producing a massive amount of data to be computed to data centers, pushing network bandwidth requirements to the limit.
- ◆ The aim of Edge Computing is to move the computation away from data centers towards the edge of the network, exploiting smart objects, mobile phones or network gateways to perform tasks and provide services on behalf of the cloud.

## Privacy and security:

The distributed nature of this paradigm introduces a shift in security schemes used in cloud computing. Not only data should be encrypted, but different encryption mechanism should be adopted, since data may transit between different distributed nodes connected through the internet before eventually reaching

the cloud. The other hand by keeping data at the edge it is possible to shift ownership of collected data from service providers to end-users.

# Scalability:

Scalability in a distributed network must face different issues. First, it must take into account the heterogeneity of the devices, having different performance and energy constraints, the highly dynamic condition and the reliability of the connections, compared to more robust infrastructure of cloud data centers. Moreover security requirements introduce further latency in the communication between nodes, which may slow down the scaling process

# **Applications:**

- 1. Guide edge control and analytics.
- 2. Oil and Gas remote monitoring.
- 3. Edge Video orchestration.
- 4. Traffic Management.
- 5. Autonomous Vehicle.

## The Advantages of Edge Computing

It's no surprise that companies saw the numerous advantages edge computing offered over cloud-based solutions and decided to embrace it. Key benefits of edge computing offers include:

Speed: By moving tools and applications for data analysis closer to the actual source of the data, reducing the physical distance the data must travel and time required to move, edge computing greatly reduces periods of inactivity or delay, thus increasing the responsiveness, speed, and quality of the overall service.

Uninterrupted, reliable connections: Edge computing offers local micro data centers for storing and processing data. As a result, companies can depend on reliable connectivity for their IoT applications, even when cloud services are affected. In addition, edge computing enables IoT applications to use less bandwidth and operate normally under limited connectivity, decreasing company concerns about information and data loss.

Lower costs: Companies can lower their costs considerably by reducing the bandwidth required, replacing data centers with localized device solutions and reducing data storage requirements, resulting in lower costs for IoT devices and applications.

# **Disadvantages of Edge Computing**

Where there are advantages, there are risks, and edge computing is no exception. Companies should be aware of the following risks of edge computing:

- ◆ Edge computing processes and analyzes only a subset of data, discarding raw information and incomplete insights. Companies must consider what level of information loss is acceptable.
- ◆ Edge computing can increase attack vectors. With the addition of the IoT, network-connected devices, and built-in computers, the opportunities have increased for attacks and malicious hackers to infiltrate the devices and access sensitive data.
- ◆ Edge computing requires more local hardware. For example, IoT cameras require a built-in computer to send video data over the internet as well as a more sophisticated computing process for more advance process applications, such as motion-detection or facial-recognition algorithm.

## The Inevitability of Edge Computing

- ◆ Edge computing is the inevitable evolution of cloud-based systems. As the world of technology continues to expand, the reach of the IoT will grow, as well, eventually connecting most electronics and computer-driven devices. In addition, the massive amount of idle computing resources that sit unused "at the edge" can be harvested for use, creating a cloud resource thousands of times larger than the one currently in use.
- ◆ From the IoT to devices' processors, sensors, and network connectivity, companies must be on the lookout for anything to help them stay in touch, remain connected, and get ahead. Until now, the best way to do that was a cloud-based solution. Now, companies may want to reevaluate their needs and goals and step to the edge.

#### Conclusion:

As IoT becomes more pervasive, edge computing will do the same. The ability to analyze data closer to the source will minimize latency, reduce the load on the internet, improve privacy and security, and lower data management costs.

By : Kavya.M Latha.B.S III BSc (PMCs)

Source: https://www.hpe.com/in/en/what-is/edge-computing.html

https://it.toolbox.com/blogs/carmashoemake r/the-advantages-risks-and-inevitability-ofedge-computing-121218

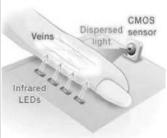
# **VEIN MATCHING**

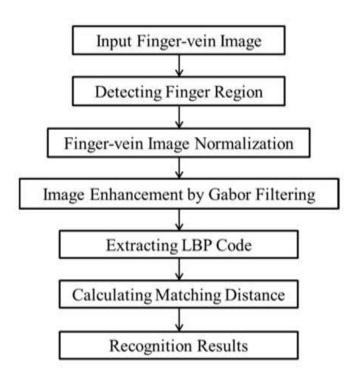
#### Introduction:

Vein matching, also called vascular technology, is a technique of biometric identification through the analysis of the patterns of blood vessels visible from the surface of the skin.

- While other types of biometric scanners are more popular for security systems.
- Vascular scanners are growing in popularity.
- Fingerprint scanners are more frequently used, but they generally do not provide enough data points for critical verification decisions. Fingerprint scanners require direct contact of the finger with the scanner.
- Vascular scanners do not require contact with the scanner, and since the information they read is on the inside of the body, skin conditions do not affect the accuracy of the reading.
- Vascular scanners also work with extreme speed, scanning in less than a second. As they scan, they capture the unique pattern veins take as they branch through the hand.







# **Applications:**

- ATMS
- ♦ SMARTPHONES CAMERAS
- ♦ INTERNET BANKING
- ♦ HOSPITALS

#### **Advantages**

Vein matching is more accurate than fingerprint recognition systems and has lower False Rejection Rate (FRR) as well as lower False Acceptance Rate (FAR).

## **Disadvantages**

Vein Matching can be greatly affected by the negative effects of the ambient light from the external environment. As a result, this could have a negative impact on the quality of the raw images which are captured.

#### Source:

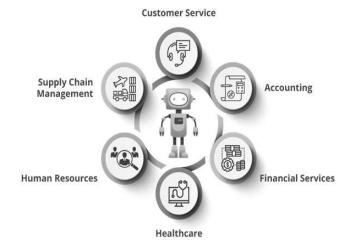
https://www.semanticscholar.org/topic/Veinmatching/2074345

By: MANISHA.S NAMRATHA.S.V III BSc(PMC's)

# ROBOTIC PROCESS AUTOMATION

#### Introduction

Robotic process automation is a software program or particularly a software robot. It is the process of automating business operations with the help of robots to reduce human intervention. RPA robots are capable of mimicking most human user actions. The software robots used in robotic process automation are programmed to do the tasks in a particular workflow. That is office type functions, which requires the ability to do several types of tasks in order. They can log into applications, move files and folders, copy and paste data, fill in forms and also perform data Manipulation, data Extraction and email Automation. RPA can be appropriate for a work when there is too much repeated work that



needs high volume of employees to do or when a work does not need a human intervention. RPA can also be used when a particular work has fixed input and output.

# **Applications**

- Accounting
- Financial services to healthcare

- ◆ In banks, RPA software robots are used to take entire responsibility of credit card functionalities. Initiating a credit card application, collecting the required documents related to the individuals, carrying out required verifications; all tasks are automatically handled by Robotic Process Automation (RPA) tool
- In hospitals registrations of patients can be done by the RPA tools. Based on the related information of patient, the patient will be guided at the Hospitals for their treatment
- Multinational companies use Robotic Process Automation in their day to day tasks. These companies, benefit by using RPA as it provides, accurate, reliable, consistent outputs with high productivity rates

### **Advantages**

- It can reduce cost of work as it replaces human resources to do their repeated work
- RPA is easy to be monitored its productivity can be visualized better. Also it can produce the result of a work in small amount of time what can one employee do in months or maybe more.
- If the RPA system is well defined, then we can get higher accuracy than what we get from a human work as computers do not get bored from the repeated work

## **Disadvantages**

- Any automation technology, RPA has the potential to eliminate jobs and this presents a major threat to the labor market
- Investment Costs are quite higher and is typically the biggest obstacle that will decide whether or not a company will invest in robotic automation
- Robots can't adjust their behavior the same way a human would.

#### **RPATOOLS**

The robot process automation can be carried out with the help of various tools, some of the tools are: UiPath, Blue Prism, Automation Anywhere, Pega system, Workfusion etc. All these tools have their own benefits and drawbacks, and have similar functioning and structure.

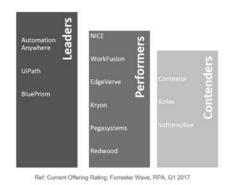


Fig: RPA Tools

# Conclusion

Due to the various benefits of RPA, its utilization is gradually increasing in the market worldwide. Most of the organizations are already implementing the RPA technology, as it optimizes the cost and frees the other resources. It is a cost-effective technique and also has non-financial benefits such as it consists of more accurate and consistent processes, which are less prone to errors. Nowadays, most of the organizations are using RPA for testing the particular application and eliminating the old testing tools due to its limitations. If properly implemented, businesses stand to benefit from it and enjoy returns on their investments.

#### Source:

https://www.edureka.co/blog/what-is-robotic-process-automation/

https://www.uipath.com/rpa/robotic-processautomation

https://www.zarantech.com/blog/introduction-robotic-process-automation/

By G.Nivetha I Bsc (EMCS)

# ETHICAL HACKING

#### INTRODUCTION:

- Ethical Hacking is also known as 'Penetration Testing' or 'White-Hat hacking', involves the same tools, tricks and techniques that hackers use, but with one major difference that ethical hacking is legal.
- ◆ Ethical Hacking can also ensure that vendors claims about the security of their products legitimate.

#### WHAT IS ETHICAL HACKING:

- Ethical Hacking-defined 'Methodology adopted by ethical hackers to discover the vulnerabilities existing in information systems operating environments.'
- ◆ With the growth of the internet, computer security has become a major concern for businesses and governments.
- ◆ In their search for a way to approach the problem, organizations came to realize that one of the best ways to evaluate the intruder threat to their interest would be to have independent computer security professionals attempt to break into their computer systems.

### **HISTORY:**

- The United States Air Force conducted a 'security evaluation'. Of the Multics operating systems for 'Potential use as a two-level (secret/top secret) system.'
- With a growth of computer networking, and of the internet in particular, computer and network vulnerability studies began to appear outside of the military establishment.

### **TYPES OF HACKERS:**

- White Hat Considered the good guys because they follow the rules when it comes to hacking into systems without permission and obeying responsible disclosure laws.
- Grey Hat- May have good intensions, but might not disclose flaws for immediate fixes.
   Prioritize their own perception of right versus wrong over what the law might say.
- Black Hat Considered cyber criminals: they don't lose sleep over whether or not something

is illegal or wrong. Exploit security flaws for personal or political gain-or for fun.

## WHY WE NEED ETHICAL HACKING?

- ◆ Ethical hacking: It is testing the resources for a good cause and for the betterment of technology. It also means to secure the system.
- Nowadays, globally, there is tremendous rise in cyber crimes, so in those cases ethical hacking acts as a safeguard on internet and corporate networks and their websites.

#### IS ETHICAL HACKING A CRIME OR NOT?

No, ethical hacking is not a crime....... Because,

- ◆ Completely trustworthy.
- String programming computer networking skills.
- ◆ Learn about the systems and trying to find its weaknesses.
- ◆ No Ex- Hackers.
- ◆ Techniques of Criminal Hackers Detection Preventions

### Advantages:

- ◆ It provides security to banking and financial establishments.
- It provides website defacements.
- It is used to catch thief.

#### **Disadvantages:**

- Ethical hackers should be trustable person.
- ◆ Hiring professionals is expensive.

#### **CONCLUSION:**

- ◆ "To catch a thief, think like a thief Similarly...... To catch a Hacker, think like a Hacker."
- Ethical Hacking is the process of hacking the Hacker.....

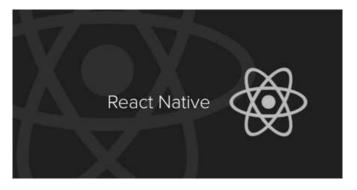
By, POORVAJA URS II BCA

Source: Google Wikipedia

# **REACT NATIVE**

#### Introduction:

It is not wrong to say that mobile phones are the half soul of every individual and when it comes to Android development or iOS development, businesses often get confused whether they should offer their consumers, a mobile app with superlative User Interface (UI) and outstanding User Experience (UX) or apps that are compatible with multiple platforms and are faster to develop in the first place. And hence, there comes the REACT Native



Development in the picture!

## **Description:**

React Native Framework helps you render UI for both iOS and Android platforms. It is an open source framework, which could be compatible with other platforms like Windows or tvOS in the near future. Since React Native components have the counterpart rights, you can reuse these components for building both Android and iOS apps. You can either incorporate REACT Native components into the code of existing app or reuse the Cordova-based code with the help of



the plugin as well. However, your existing app must be built with Cordova and Ionic code.

Another reason why the REACT Native framework has gained popularity in recent years is that the framework helps cater both the platforms at one go and ends the holy war of selecting either iOS or Android development for mobile developers. Hence, giant companies like Facebook, Instagram, Skype, Airbnb, Tesla, Walmart, Baidu Mobile, Bloomberg, Uber EATS Vogue and many more have shifted their eyeballs towards it.

Initially invented for iOS development, the REACT Native Framework sees the popularity and success and hence Facebook, later on, decided to provide support for the Android platform as well. Thus, the REACT Native apps can be developed via using a single codebase for both the platforms simultaneously, which increased its popularity even more.

Since the social media giant Facebook has developed this framework, its existence remained uncertain as Facebook has all the rights to kill off the project anytime. Though with the current popularity of the technology, it is unlikely to happen.

#### Conclusion:

The REACT Native Framework is not flawless as of now and has some glitches that are yet to be addressed. Despite having few loopholes and hiccups, the REACT Native Framework passes all the tests and hurdles to become the number one choice for almost every React Native Development Company to develop the mobile apps. A React native developer not only finds the agility and ease while developing the REACT Native apps, but also experiences the high efficiency and low cost & workload during the process. What makes the process more exciting is that you do not need to focus on both iOS and Android platforms to create the app. Hence, many colossal companies in the world rely on the REACT Native Framework to create exciting apps that we use on a daily basis.

Source: Thinwik-medium.com En.wikipedia.org

> By : **K.DIVIJA** III BCA

# **COMPUTER JOKES**

1. What did the spider do on the computer?

A: Made a website!

2.: What did the computer do at lunchtime?

A: Had a byte!

3. What does a baby computer call his father?

A: Data!

4: Why did the computer keep sneezing?

A: It had a virus!

5. What is a computer virus?

A: Aterminal illness!

6. Why was the computer cold?

A: It left it's Windows open!

7. Why was there a bug in the computer?

A: Because it was looking for a byte to eat!

8. Why did the computer squeak?

A: Because someone stepped on it's mouse!

9 What do you get when you cross a computer and a life guard?

A: Ascreensaver!

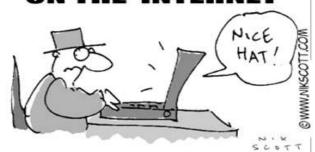
10 Where do all the cool mice live?

A: In their mousepads

Source:

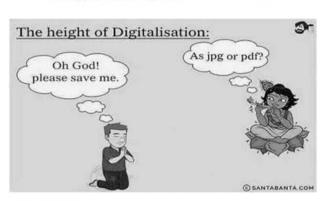
https://www.ducksters.com/jokes/computer.php

# PRIVACY ON THE INTERNET





WHY COMPUTER ENGINEERS SHOULD NOT BE SURGEONS



NO, GRANDPA
NOT RAINBOW
IT'S WIFI.

DIGITALISATION

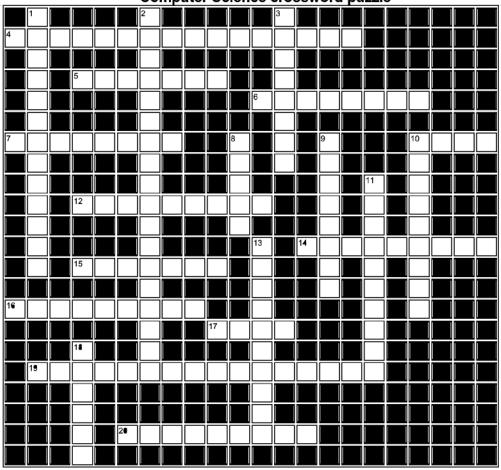
Polymony

By: Nagapriya II BCA

Source: GOOGLE

# **CROSS WORDS**

Computer Science crossword puzzle



#### Across

- Is the study of computers, computing, programing, and computation with computer systems
- 5 An electronic visual display for computers
- 6 The programs that help the computer run
- 7 An electronic device
- 10 To update a document that has always been saved as
- 12 Is a layout software
- 14 A printed version on paper
- 15 When you save document for the first time giving it a name
- 16 Operation of a computer
- 17 A program used for typing documents
- 19 An application developed by Microsoft that was made by bill gates

## Down

- 1 Sdf and jkl; where your hands should be when typing
- 2 Devices that connect to a computer in order for us to get input and output (keyboard,printer, monitor)
- 3 Apanel of keys that operate a computer
- 8 Software used for a spreadsheet
- 9 Physical components that make up a computer system
- 10 Typed but not printed yet and you can see it on the computer moniter
- 11 Device used to permanently restore and receive information
- 13 A presentation you can use for school or businesses
- 18 Database software

Answers Answers Any Keys 2. Peripheral Devices 3. Keyboard 4. Computer Science 5. Monitor 6. Software 7. Computer 8. Excel 9. Hardware 10. Soft Copy 11. Hard Drive 12. Publisher 13. Power Point 14. Hard Computer 8. Excel 9. Hardware 10. Word 18. Access 19. Microsoft Office 20. Algorithm Copy 15. Save as 16. Computing 17. Word 18. Access 19. Microsoft Office 20. Algorithm

Source:Internet

# STAFF ACHIEVEMENTS

- Smt.Jyothilakshmi.G.Kava and Smt.Nayana.M.P attended two day Management Development Programme on Essentials of Business Analytics on 12th and 13th June 2019
- Staff members of the Department attended Faculty Development Programme on Communicating Effectively in Class room Communication Skills for Teachers organized by MMK & SDM MMV in association with SDM IMD, Mysore on 13th June 2019.
- A paper entitled "An Overview of Machine Learning" was published in International Journal of Innovative Studies in Science & Engineering Technology (IJISSET) (ISSN: 2455-4863) 0.29
   Impact Factor Published in volume 5 Issue 7, July 2019 by
  - Smt Ramya S K, Smt Nayana M P & Smt Jyothilakshmi G Kava Assistant Professors of Computer Science.
- Mrs Rajitha V & Mrs Jyothilakshmi G Kava attended a Guest Lecture on the topic Cyber Security and Consumer Awareness at St. Joseph Women's College, Sathagalli, Mysore on 22nd August 2019.
- Smt.K.S.Sukrutha and Smt.Rajitha.V attended NAAC Orientation Programme "YOJANAA" under the "PARAAMARSH" Scheme of UGC held at Sri Dharmasthala Manjunatheshwara College(AUTONOMOUS), Ujire on 8th November 2019
- Smt.K.S.Sukrutha and Smt.Ramya.S.K attended a One Day Workshop on R Language for Teachers at Sri Jayachamarajendra College of Engineering, Mysore organised by Teaching Learning Centre,ICT at IIT Bombay on 9th November 2019

# SHORTCUT KEYS

- F1: Opens help menu when pressed with Windows button
- F2: Alt + Ctrl + F2opens Document Library in Microsoft Office
- F3: Shift + F3 lets you change from lowercase to uppercase to all caps in Word
- F4: Alt + F4 closes window
- F5: Starts slideshow in PowerPoint
- F6: Ctrl + F6 lets you easily switch between Word documents
- F7: Alt + F7does a spelling and grammar check in Microsoft Word
- F8: In Excel, enables extend mode for arrow keys
- F9: Ctrl + F9inserts empty fields into Word
- F10: Opens menu bar
- F11: Shift + F11 adds a new spreadsheet in Excel
- F12: Opens Save as in Word

# Photo Gallery



Mrs Rajitha V & Mrs Jyothilakshmi G Kava attended a Guest Lecture on the topic Cyber Security and Consumer Awareness at St. Joseph Women's College, Sathagalli.



Alumni Faculty Programme by Smt.Anjali. M.P, Lecturer in Computer Science, Sharada Vidya Mandira, Mysuru to III BSC Students



Alumni Faculty Programme by Ms. Komal .S Test Engineer, Infosys, Mysuru to III BSc Students



Student Faculty Programme by Ms.Preethi.C.S of III BCA to II BCA Students



Smt.Jyothilakshmi.G.Kava and Ms.Nayana.M.P attended Management Development Programme on the topic Essentials of Business Analytics at SDM-IMD, Mysore



Alumni Faculty Programme by Ms.Kavyashree Rao, HOD of Computer Science, Sharada Vilas College, Mysuru to III BCA Students.



Student Faculty Programme by Ms.Divyashree.N of III BCA to I BCA Students



Smt.K.S.Sukrutha and Smt.Rajitha.V attended attended NAAC Orientation Programme at Sri Dharmasthala Manjunatheshwara College (AUTONOMOUS),Ujire

# Photo Gallery



Student Seminars



Inauguration of Tech Amateur IT Club by Mr Mohamed Minhaj Associate Professor, SDM -IMD



Talk on Building A Web Presence by Mr Mohamed Minhaj, Associate Professor, SDM -IMD, Mysore



Ted Lecture Programme organized by Department of Computer Science



Newly elected Office Bearers of Tech Amateur IT Club - 2019 - 20



Release of 23rd issue of GI Talk Bi-Annual News Letter by Principal Prof. Sainath Malligemadu



Tech Talk Competition organized by Tech Amateur IT Club



Department Wall Magazine "Tech - World" inaugurated by Prof. Sainath Malligemadu, Principal

# CONGRATULATIONS TO ALL THE TOPPERS WHO HAVE SECURED HIGHEST MARKS IN THE UNIVERSITY EXAMINATIONS HELD DURING APRIL / MAY 2019



Chaitra Hegde 197/200 VI Sem. - B.C.A.



**Brunda G.** 195/200 - VI Sem. B.C.A.



Hamsini S. Kumar 195/200 - VI Sem. B.C.A.



Aishwarya P 195/200 - VI Sem. B.C.A.



**Chaitra S.** 194/200 - VI Sem. B.C.A.



Pooja Kumbara 194/200 - VI Sem. B.C.A.



**Kusuma** 551/600 - IV Sem.B.C.A.



**Divyashree M.** 541/600 - IV Sem. B.C.A.



**Preethi C.S.** 532/600 - IV Sem. B.C.A.



**Sindhu G.** 270/300 - II Sem. B.C.A.



**Sunitha M.** 268/300 - II Sem. B.C.A.



**Jyothi M.** 263/300 - II Sem. B.C.A.



**Rekha S.** 275/300 - VI Sem. B.Sc.



Rashmi Urs 269/300 - VI Sem. B.Sc.



Ashitha H.R. 260/300 - VI Sem. B.Sc.



Shravya 92/100 - IV Sem. B.Sc.



**Sowmya M.N.** 90/100 - IV Sem. B.Sc.



Sumalatha S.R. 89/100 - IV Sem. B.Sc.



Chaitanya H. 91/100 - II Sem. B.Sc.



Adithi Aaul 90/100 - II Sem. B.Sc.



**Anusha P.V.** 88/100 - II Sem. B.Sc.

# Editorial Team



Smt Rajitha V. Asst. Professor of Computer Science



Smt Jyothilakshmi G. Kava Asst. Professor of Computer Science



Ms. Kavya Urs Student Editor II Sem. B.C.A.



Ms. Poorvaja Urs Student Editor II Sem. B.C.A.