TECH BEVY | 2016 –17

ANNUAL COLLEGE MAGAZINE

Department of computer science and engineering

TechBevy

METHODIST

COLLEGE OF
ENGINEERING & TECHNOLOGY

O.U.

C++

WEKA
The University
of Waikato

Java

Microsoft®
Technology
Associate

ORACLE®

WORKFORCE DEVELOPMENT PROGRAM
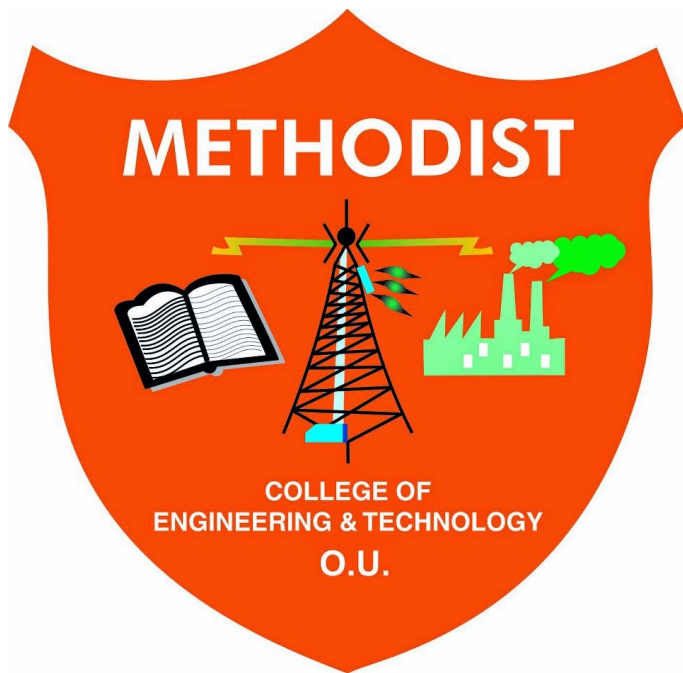
" Tomorrow's **technology** through todays education "

Contents

About
the
College

Methodist College of Engineering & Technology is a Non-Minority Educational institution, established in the year 2008, over 6.53 acre sprawling campus, situated at Abids, in the heart of the city of pearls, **Hyderabad** (Capital city of Telangana state). The college is well connected by public transport from every corner of the city. MCET is affiliated to Osmania University at the state level and with AICTE in the Central level.

Methodist College of Engineering and Technology strives towards **excellence** by imparting essential technical skills as well as a holistic approach towards grooming the students into responsible, worthy citizens of the future.

Life in Methodist is not just limited to the classroom-teaching, but spins beyond the textbooks to develop character and thus mould total the personality of the students to carve a niche for themselves in the society.

The ultimate goal of the Methodist College of Engineering and Technology is to educate and graduate individuals who possess the technical and social competence and confidence to succeed in professional practice and advanced education, to be lifelong learners, and to exercise responsible citizenship.

About
the
Department

The Dept was established in the year **2008** with an intake of 60 and subsequently enhanced to 120 in 2010. The present student strength is 300+ and faculty strength is 29. The department constitutes a group of energetic, experienced and well qualified faculty from industry and academia. The department houses state-of-the laboratories providing hands-on training and thus encouraging them to build major and minor projects. The alumni of the department are well placed in core companies and MNCs.

The **department** instils quality education with holistic development. The students are encouraged to train and update their technical skills through various in-house trainings, knowledge transfer workshops, value added courses and project exhibitions. They are motivated to improve their communication & written skills through special trainings, to participate in extra-curricular activities, sports etc. The students are continuously evaluated through internals and quizzes. The slow learners are monitored with much more care and hence are uplifted towards betterment.

The department **emphasizes** a student – centric and friendly learning environment by systematically balancing academics and activities. The Faculties and students always work in tandem in organizing the various college level activities and technical fests. The relentless efforts of the faculty have helped the department in earning a good name & fame in a short span of time.

Vision
&
Mission

OUR VISION

To become a leader in providing Computer Science and Engineering education with emphasis on knowledge and innovation.

OUR MISSION

To offer flexible programs of study with collaborations to suit industry needs.

To provide quality education and training through novel pedagogical practices.

To expedite high performance of excellence in teaching, research and innovations.

To impart moral, ethical values and education with social responsibility.

Glimpses
of the
Year 2016-17

1. Special Courses Launched:

The department launched a course called "Spoken Tutorials", in collaboration with IIT – Mumbai. Under the program the students will be given training on various latest technical tools. The department is running these programs to all the branches of the college. Each department has selected the course of their requirement.

2. Student Achievements

- The students of 2016 passed out and secured 13 distinctions and 27 First classes.

- Out of 47 students very few are pursuing their Masters Program abroad.

- 16 students are placed in MNC companies like – Amazon, Amazon, Congnizant, Syntel, Accenture, Special Courses LaunchedIBM etc.

- A Project entitled "Central Repository for Chemical Factories", under the ministry: Department of Chemicals and Petrochemicals, of Mr. Murtuza Akhtari and a team of six members of B.E. III / IV, CSE – Sec. B selected for Smart India Hackathon 2017 Grand Finale scheduled on April 01st and 2nd, 2017.

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- Ms. N. Priyanka, Ms. Shiksha Garg, Mr. Vinith and Mr. Sanjay of B. E. II/IV, participated in "OU QUIZZOTIC, 2017", at Osmania University, Electronics and Communication Engineering Branch.

- B.E. III/ IV, Semester – II, participated in the Technical QUIZ, of annual Cultural Fest of CBIT, SHRUTHI – 2017 on 9th, 10th & 11th March 2017, and won second prize.

- The students of all sections, of the department participated in Swami Vivekananda Birth Anniversary celebrations during January 2017.

- Mr. K. V. N. Purushotham, Mr. Pravanav Kastury and Taha Shaikh participated in the "Literary Fest – VERBAMAXIMA, 2017", held at BITS, Hyderabad Campus on February 4th and 5th , 2017.

- CSE II year student Mr. Abhinay Kumar won "Gold Medal" in Telangana Youth Boxing championship .

- CSE II year student Mr. Abhinay Kumar won "Gold Medal" in Aiyllaiha Memorial Telangana championship.

- CSE II year student Mr. Abhinay Kumar won "Best Boxer and Gold Medal" in Telangana Sports Meet held at Karimnagar.

- CSE II year student Mr. Abhinay Kumar won "State Level Gold Medal" in Telangana Avishkarana Sports Meet.

- CSE II year student Mr. Abhinay Kumar won "Gold Medal" during Republic day Sports meet. He received the prize from Home Minister of Telangana

3. <u>Workshops and Seminars Organised</u>

- The Department organized **"Train the Trainer"** FDP, for Module – 3 and Module – 4 of CCNA in collaboration with TASK and CISCO Networking Academy, as part of the Pre-Centenary Celebrations of Osmania University, from 12-02-2017 to 25-02-2017.

- The Department conducted a seminar on "**Career Opportunities After Engineering**" to CSE B.E. III/IV on 14th February, 2017. Resource person of the seminar Mr. Ramulu Retired IRS and Member of Digital India Program

- The department organized a one day workshop on "**Statistical Analysis using WEKA and R Tool**", on 03-02-2017. The resource person for the workshop is Dr. A. V. Krishna Prasad, Associate Professor, MVSR, Hyderabad.

- The department organized a guest lecture on **"Information Security"**, by Prof. Ramki Thurimella, Prof & Chair, Director Colorado Institute of Security & Privacy on 9th March, 2016.

- The department organized a Two Day Workshop on "**MTA (Microsoft Technical Associate**" – a certification exam. 78 students and 7 faculties qualified in Data Base Fundamentals, Web fundamentals and Software Fundamentals.

- The department organized "**Oracle Work Force Development**" training program from 12-09-2016 to 18-09-2016 about 50 students registered for the program. They were given training in "Oracle – JAVA SE 7.0". Mr. Thirupathi, Assistant Professor of the department is the coordinator for the program.

- The department organized a seminar on "**Career and Employability opportunities National and International front after graduation**", by P. S. Chandramohan Reddy of M/s Jamboree.

- The department organized a seminar on "**Binary Search Trees AVL Trees**" for B.E II/IV on 17-10-2016 under "Tech Bevy" by Mr. P. Ramanaiah.

4. <u>Faculty Excellence</u>

- **Mr. T. Praveen Kumar,** Assistant Professor and Mr. D. Rajashekar Assistant Professor, got admission in Ph. D., in "JNTUH", during October 2016.

- **Mr. Thirupathi Reddy**, Assistant Professor got admission in Ph. D., in "GITAM" University, during March 2017 .

- **Mr. Thirupathi Reddy**, Asst. Professor of the department is the faculty secured "Certificate of Exceptional Participation", in "Smart India Hackathon 2017", Grand Finale which was held on April 1 & 2, 2017.

- **Mr. D. Rajashekar** and **Mr. Md. Tauqueerullah** got 7 and 6 Meriti Certificates respectively at "Train the Trainer" FDP, for Module – 3 and Module – 4 of CCNA in collaboration with TASK and CISCO Networking Academy, as part of the Pre-Centenary Celebrations of Osmania University, during 12-02-2017 to 25-02-2017.

- **Mrs. Lavanya Pamulaprty** has completed certification course on R and SAS

- Seven Faculty members **Mrs. Saritha, Mrs. Unnathi, Mr. Ramanaiah, Mrs. Sowjanya, Ms. Afreen Sana Bagum and Ms. Samatha Sagar** certified in Data Base Fundamentals / Web Fundamentals.

- **Mr.T.Praveen Kumar** is a guest faculty for BITS (Birla Institute Of Technology and Science), Hyderabad Campus.

- **Mr. D. Rajashekar** is a guest faculty for VITS (Vellore Institute of Technology)

5. <u>Conferences / Workshops attended by Faculty</u>

- **Mr. T. Praveen Kumar**, Assistant Professor of the department, participated in a one day workshop on "Learner Centered Approach to Teaching", organized by BITS – Pilani, on 9th March 2017.

- **Mrs. C. Sravanthi Reddy** attended a two day workshop on " FOSS (Free Open Source Software in Teaching and Learning" at NIIT Warangal, during 4th and 5th March, 2017.

- **Mrs. Lavanya Pamulaparty**, **Mr. Tauquerrullah** and **Mr. Rajashekar** participated in two day International conference, on "CISCO Network Academy", Organised by the CISCO Networking Academy, from 09-02-2017 to 10-02-2017.

- **Mr. L. Thirupathi Reddy** and **Ms. Afreen Begum Sana** participated a one day workshop on "Awareness Workshop on Smart India Hackathon 2017" on 6th January, 2017

- **Mr. Sandeep** and **Mr. Thirupathi** attended a 3 day "Effective Teaching Skills" FDP at Stanley College of Engineering and Technology, Hyderabad from 28th to 30th December 2016.

- **Mrs. E. Shailaja**, attended a five day workshop on "Cryptography & Its Applications", in the department of CSE, University College of Engineering, from 19th to 23rd December, 2017

- **Mr. L. Thirupathi Reddy**, Assistant Professor of the Department, participated in one week FDP on "Recent Trends in Network Security with hands on using NS-3", organized by Dept. of CSE & IT in collaboration with IEEE – MVSR, and CSI – MVSR EC, Hyderabad during 19th to 24th December, 2016.

- **Mr. G. Vedavyas** attended a "Intel HPC Developers Conference 2016" on 15-12-2016

- **Mr. Md. Tauqueerullah** and **Mr. D. Rajashekar** attended a two week FDP, for Module – 1 and Module – 2 of CCNA in collaboration with TASK and CISCO Networking Academy during August 29th to September 10th 2016

- The Head and Faculty of the department participated in two day FDP on "**The Role of Basic Sciences in Enhancing the quality of Engineering**", at MCET., Hyderabad from 2nd to 3rd December, 2016

6. Paper Publications by Faculty

- "**A Gradient Boosting Approach for large-scale Network Parameter Configuration In Big Data**" by Mrs. Lavanya Pamulaprthi, Mr. T. Praveen Kumar at International Conference on "Recent Innovations in Engineering and Technology", at Hotel Katriya, Organised by Aurora's Scientific, Technological and Research Academy.

- "**LSBSM: A Novel Method for Identification of Near Duplicates in Web Documents** " by Mrs. Lavanya Pamulaparthy published in ISSN 1947 5500 IJCSIS February 2017 Volume 15 No. 2

- "**Comparative study on Wifi and Lifi Technology**" by Mr. Sandeep Ravikanti, accepted in "World Congress on Emgineering and Computer Science 2017 (WCECS 2017).

- "**Future Drifts and Modern Investigation Tests in Wireless Sensor Networks**" by Mr. L. Thirupathi Reddy, Assistant Professor of the Department, published in International Journal , IJARCSMS – August 2016, Vol 4, Issue 8, ISSN; 2321 – 7782

Every Student, Every Day: Strategies To Engage Young Learners With 21st Century Skills.

FACULTY ARTICLE

"Learning the basics of being a digital citizen is a critical skill for young learners in the 21st century."

21st-century learning refers to the skills and technologies that will position our students to succeed in a competitive world. Students must approach lifelong learning with a flexible mindset and need to tackle 21st-century issues. They must learn to work with and be able to use different strategies for this purpose. Teachers need to demonstrate their willingness to change, be flexible and avoid rigidity; able to try and explore new things for the benefits of students and self-growth.

Students must be encouraged to try new things at home by taking support from the faculty and parents which will improve their problem-solving skills and critical thinking.

The following are some of the tasks we can assign to our students

1.Project Based Learning: and group work is the standard in the education system and working with a variety of people with each contributing to the whole is a hallmark of 21st-century learning. providing brainstorming ways to solve a problem and trying a variety of potential problems until one works is how great discoveries are made

Project-based learning encourages students to Learn by doing and understanding previous problem methods and case studies. The students need to focus on the 7 D's principle to better understand the scenario

Define — Scope of the project.

Discover — acquire the knowledge and start doing research on the selected problem

Dream — analyse the possible ways the problem can be solved, and imagine what you need to do for obtaining the end results.

Design — make use of prototypes to start building your own solution

Develop -use tools to take the project into the action.

Deploy — complete and present the project to the end-users.

Debrief — Reflect on where the project succeeded and its feedback.

2.**Collaborative Learning**: We can ask the students to team up for solving problems independently or as a group. encourage them to participate in Coding challenges and Hackathons etc

3. **Keep On Upgrading**: train the students in such a way that they should be able to Adapt behaviour from different environments and able to invoke with different tools and technologies which are currently buzzing in the industry .Like exploring the stuff related to the new IDE's and Programming languages newly introduced.

4. **Go digital and say digital by taking digital classes** (Teaching with Phablets)
Technology plays a key role in 21st-century learning. Where use of Podcasts, Digital classes, video channels, blogs, forums and online learning all play a vital role in how education is moving and is significant in educational intuitions. As we need to inspire our students to be lifelong learners, we must focus on digitization, online and ease in communication with the help of new and innovative strategies that serve to help and tackle our the students in a better possible way and we can address the real-world issues. making use of online class/meeting applications.

5.**Self-Directed Learning**: one of the important and essential components is to encourage the students towards self-directed learning. The 21st-century buzz word for doing this activity is Massive Open Online Courses(MOOC's).

If we follow the above **5** methods in teaching we can help and guide our young learners in the best possible way to close the technology skills gap So, I wanted to say Our Life is fragile. We're not guaranteed a tomorrow so give it everything you've got now to the students and society.

The main motto behind writing this article is First, get the right people into the bus and then wrong people off the bus So, if we place the right people in the right seats, and then they can figure it out their destination.

- **MR. R. SANDEEP**

Blockchain

FACULTY ARTICLE

The blockchain technology (BT) offers great potential to foster various sectors with its unique combination of characteristics, for example, decentralization, immutability, and transparency. We see promising possibilities in the use of this technology for science and academia.

Blockchain seems complicated, and it definitely can be, but its core concept is really quite simple. A blockchain is a type of database. To be able to understand blockchain, it helps to first understand what a database actually is.

A database is a collection of information that is stored electronically on a computer system. Information, or data, in databases is typically structured in table format to allow for easier searching and filtering for specific information.

One key difference between a typical database and a blockchain is the way the data is structured. A blockchain collects information together in groups, also known as blocks, that hold sets of information. Blocks have certain storage capacities and, when filled, are chained onto the previously filled block, forming a chain of data known as the "blockchain." All new information that follows that freshly added block is compiled into a newly formed block that will then also be added to the chain once filled.

Another important feature is its accuracy. Transactions on the blockchain network are approved by a network of thousands of computers. This removes almost all human involvement in the verification process, resulting in less human error and an accurate record of information. Even if a computer on the network were to make a computational mistake, the error would only be made to one copy of the blockchain. In order for that error to spread to the rest of the blockchain, it would need to be made by at least 51% of the network's computers.

The most appealing feature of blockchain is its transparency. Most blockchains are entirely open-source software. This means that anyone and everyone can view its code. This also means that there is no real authority on who controls Bitcoin's code or how it is edited. Because of this, anyone can suggest changes or upgrades to the system. If a majority of the network users agree that the new version of the code with the upgrade is sound and worthwhile then Bitcoin can be updated.

Like most millennials its age, blockchain has seen its fair share of public scrutiny over the last two decades, with businesses around the world speculating about what the technology is capable of and where it's headed in the years to come.

With many practical applications for the technology already being implemented and explored, blockchain is finally making a name for itself at age twenty-seven, in no small part because of bitcoin and cryptocurrency. As a buzzword on the tongue of every investor in the nation, blockchain stands to make business and government operations more accurate, efficient, secure, and cheap with fewer middlemen.

- MS. E.SHAILAJA

Best
Projects
2016-17

MINI AND MAJOR PROJECTS BY THE STUDENTS

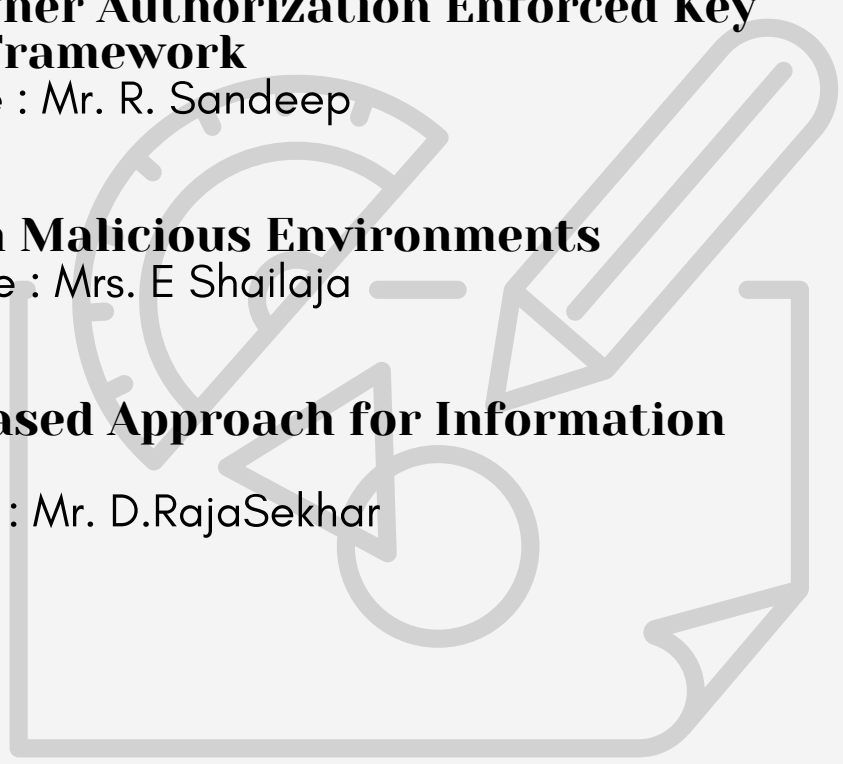## Privacy and Owner Authorization Enforced Key Management Framework
Project Guide : Mr. R. Sandeep

Data Lineage in Malicious Environments
Project Guide : Mrs. E Shailaja

A Cryptology Based Approach for Information Security
Project Guide : Mr. D.RajaSekhar

Coding
vs
Programming

Coding vs programming is a debate that has become relevant in the software development community fairly recently. Read this article to find out why they are different and why it is important to know the distinction.

With the recent rise in computer science classes across all grades, we're starting to grow our personal vocabularies in ways that make the average person uncomfortable.

"Coding" and "Programming" are the two most important approaches in Software Development Industries. Coding is basically the process of creating codes from one language to another one. It can also be called as a subset of Programming since it actually implements the initial steps of Programming. It involves writing codes in different languages as instructed. Programming is the process of developing an executable machine level program that can be implemented without any error. It is the process of formally writing codes so that the human inputs and corresponding machine outputs remain in sync.

Coding is the process of translating and writing codes from one language to another whereas Programming is the process of building an executable program that can be used to carry out proper machine level outputs.

To become a programmer, different aspects of any approach needs to be considered. In the case of coding, one just has to deal with the codes and concerned requirements. So, complex programming requires a much more in-depth understanding of the language.

Coding can be defined as a part of the Programming approach whereas Programming can be defined as a superset of Coding. It deals with different aspects of any programming base including the coding approach.

People often confuse coding and programming and use these two terms interchangeably. Let's just get this out of the way now — they're not the same thing, and in fact, they are quite different.

- MR. MURTUZA AKHTARI

Is
Python
Useful?

Python is easy to use, powerful, and versatile, making it a great choice for beginners and experts alike. It allows you to think like a programmer and not waste time with confusing syntax.

Google uses a mix of languages, with C++, Python, and now Go among them. Early on at Google, there was an engineering decision to use "Python where we can, C++ where we must." Python was used for parts that required rapid delivery and maintenance. Then, they used C++ for the parts of the software stack where it was important to have very low latency and/or tight control of memory.

Like Google, Spotify and Netflix use a mix of languages. Spotify uses Java heavily, but uses Python for things like their Web API and their Interactive API console, which lets developers explore endpoints with an easy-to-use interface. Spotify also uses Python for data analytics and other non-customer facing processes, such as a DNS server recovery system, their payment system, and their label content management system. Netflix uses a mix of Java, Scala, and Python, and gives developers autonomy when choosing which language fits the problem best. If you take a look at these companies, you can see they benefit from Python for its ease of use and because it's great for rapid prototyping and iteration. You can also see that Python can be used for a wide variety of applications, and as you learn the basics of Python, you'll be able to create almost anything you want. Many great developers contribute daily to the Python community by creating Python libraries. These libraries can help you get started so that you don't have to write code to reinvent the wheel.

There are lots of great reasons to learn Python, and hopefully a few of the examples and resources I've shown today have helped you see how you could be using it too.

- MR. VINITH

Latest
Trend
in CSE

Oculus Rift

Four years after its first crowdfunding campaign on Kickstarter, the first commercial version of Oculus Rift launched in 2016, rekindling interest in virtual reality (VR) all over the world. Oculus overshot its funding goal many times over before its acquisition by Facebook.

Oculus Rift focused on gaming at launch, but its success led to more competition and innovation in the fields of virtual reality (VR) and augmented reality (AR). Put simply, the Oculus Rift made virtual reality more affordable (though not too much!) for the masses.
While technologies like AR and VR haven't become commonplace yet, newer products like Oculus Go—a more portable VR headset— and Microsoft's Hololens, an AR headset, continue to show many potential applications and benefits. Hololens, in particular, has helped surgeons to understand a patient's unique anatomy quickly and accurately, while the police have used it to 'record' and revisit crime scenes!

- MR. SANJAY

CSE
Jokes

1. What do you call it when computer science majors make fun of each other?
Cyber boolean

2. Computer Science major walks into an English class
The Professor says "Welcome to English 101".
The student panicks.
"What's wrong?" asks the Professor.
"I missed the first 4 English classes".

3. Why didn't the client tip the server?
Because they didn't have enough cache!

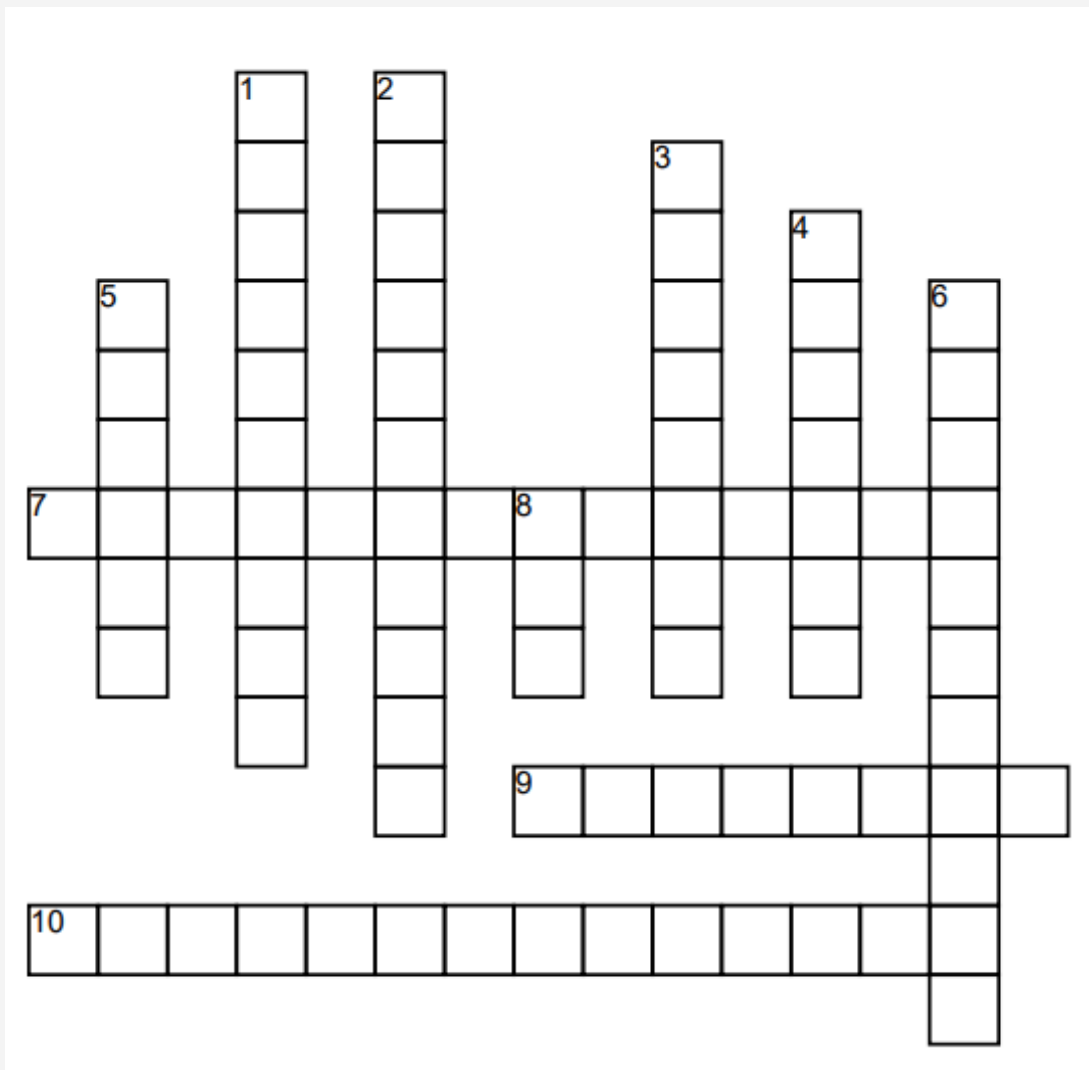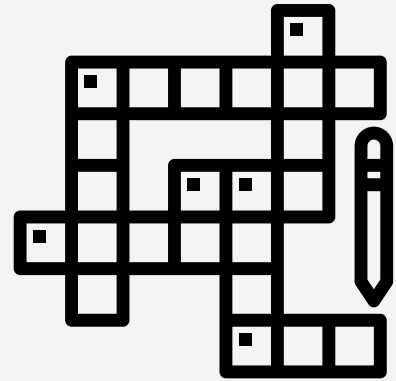4. Why did the spider get on the computer?
To check his website.

5. What are Russian computers best for?
ComPutin

6. A computer got bitten by a mosquito
It got mal-waria
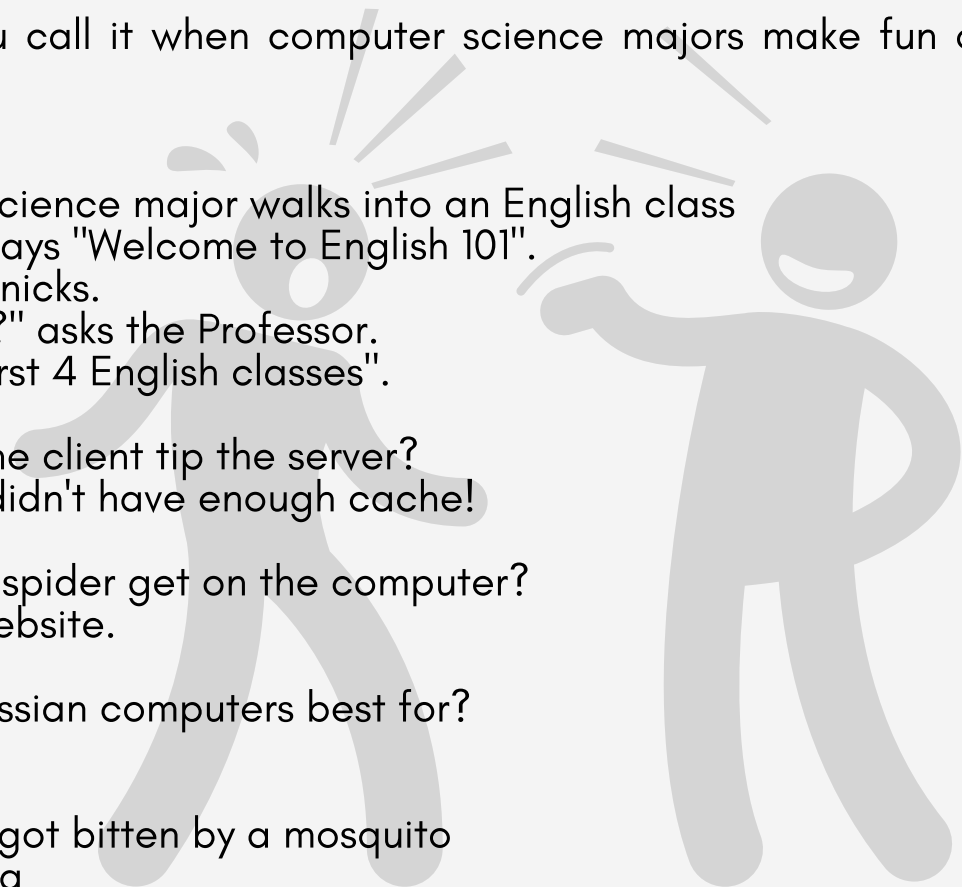
CROSSWORD
PUZZLE

NON TECHNICAL CONTENT

CROSSWORD
PUZZLE

Across

7. Creator of the analytical engine
9. Converts the programming language to machine code AHEAD OF TIME.
10. A computer program set up to run like a computer inside a computer

Down

1. Word based program that can take time to learn
2. The creator of the first program. (It never actually ran)
3. The low level language that speaks to the computer
4. A collection of pre-scripted commands that someone can use in their programs
5. A language that emphasizes less wordy commands
6. Converts the programming language into machine code AS IT RUNS
8. A mistake in programming

Alumni
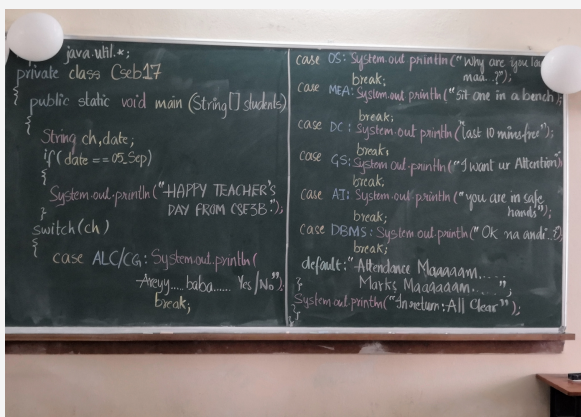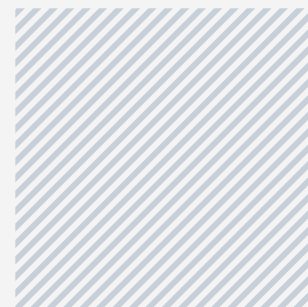# Meet

THE PAST AND THE PRESENT

Gallery

THE DEPARTMENT IN PICTURES

Gallery

THE DEPARTMENT IN PICTURES

"Engineering is not only study of 45 subjects but it is moral studies of intellectual life"

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The End