CHITKARA UNIVERSITY

WALL FOR ALL
Volume 8, Issue 1

Contents

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Dear Readers,

The nostalgic feeling that one experiences while sifting through the dusty old pages of the college magazine cannot be expressed in words. However, very few of us have retained those copies, and most of those precious articles that we wrote during those golden days with enthusiasm are lost forever. With the advent of e-books and other online media, the days of paper-bound college magazines are gone, and the digital platform has paved way to allow retention of such publications without much effort.

Wall-for-All, the e-Magazine published by the Department of Computer Applications, is one such effort that was started with an intent to provide a chance to all students and faculty members to share their thoughts and knowledge, and hone their skills in creative writing.

I am happy to see the enthusiasm of eminent members of the department to contribute to Wall for All. This shows the positive and creative energy of the contributors. However, it would be really wonderful if we can see the articles contributed by more students in the next editions, for this e- Magazine is intended to be a writing pad for each member of the department.

I proudly present the current edition of *Wall for All*.

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Student Engagement in Online Classes: Case Study

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Broad Aim: To engage the students behaviorally, emotionally and cognitively:
Outcome:
- Active learning
- Collaborative Learning
- Skills Enhancement – Technical, Interpersonal and Communication
- The student who gathers maximum stars may receive a surprise gift and a commendation certificate from the Dean and class teacher.

Teacher: Today is our first class and the participation of each student is expected. It is important to make the class highly interactive.

The class has 30 students divided into 10 teams. The teams are: (1) Lakshya (2) Bravo (3) Dare Devils (4) Knights (5) Warriors (6) Panthers (7) Jaguars (8) Titans (9) Terminators (10) All Stars.

In addition to curricula, we shall have some team activities and also some individual activities during the class. Let me explain these with the help of a few examples:

Individual Activities

Activity 1: End note and Mid-notes/ fillers
Objective: Understand and remembering the concepts discussed during the class.
Outcome: Purple star for a correct response.
Example: **End-note -** What was two of your Highlights of the topic?
   Mid-notes- Briefing of the key learnings up to a certain point.

Activity 2: MCQs based on subject
Objective: Cognitive learning such as interpret, synthesis and apply your knowledge.
Outcome: Purple star for a correct response.
Example: 1. Which of the following formulas in big-O notation best represent the expression $n^2+35n+6$?
(a) $O(n^3)$ (b) $O(n^2)$ (c) $O(n)$ (d) $O(42)$
2. Which term is used to describe an $O(n)$ algorithm.
(a) Constant (b) Linear (c) Logarithmic (d) Quadratic

Activity 3: Quiz (general/ technical):
Objective: is to engage students and make them learn about Top IT Companies and their CEOS/ Senior executives/ IT magazines/ Major technologies/ IT entrepreneurs/ Famous Indians in IT sector/ Brand / Company logo Recognition/ Brand slogan recognition.
Outcome: Red star for a correct response.
Examples:
1. Which brand do you recall when you hear: "Connecting People".
Answer: Nokia
2. With which organization is Vinod Khosla currently associated with?
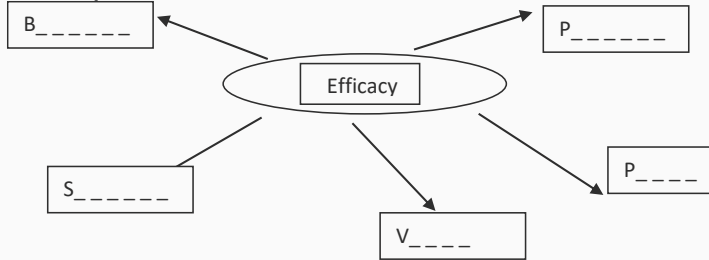Answer: Sun Microsystems
3. What is the country of origin of Samsung?
Answer: South Korea

Activity 4: Semantic Maps.
Objective: Vocabulary building by knowing the meaning of the word and mapping it with its synonyms.
Outcome: Red star for a correct response.

Example:

```
B _____                           P _____
           Efficacy
S _____                           P ____
                V ____
```

Activity 5: Word Pairs
Objective: Evaluate words in pair if the words are the same, opposite, go together, or are unrelated.
Outcome: Purple star to the performer.
Example: Their-There; A few-Few; Capital-Capitol.

Activity 5: Sequential Vocabulary building
Objective: Student Initiated – Active Learning
Exercise (.i.e. the responsibility of learning is transferred to the learner). Five new vocabulary building words of the day (Test to be taken at the end of the classes. Every day a new set of students should introduce these words).
Example: Abject, Bleak, Caveat, Decoy, Egalitarian.

Group Activities: Collaborative Learning based on Team Skills

Activity 1: Tell a Motivational Story - TAMS- mythology/ real events
Objective: Some students will have a drive from within to learn new things and explore new ideas while some others look into successful persons around them and get self-motivated to learn hard.
However, this is not the case for all students and many of them will need immense motivation and inspiration from teachers and parents to work hard.
Stories are always a favorite area for students that invoke their love and interest. This is one of the reasons why teachers use this as a tool to motivate them in many areas.

Example: Let go of your stresses
A psychology professor entered the classroom with half a glass of water in his hand. The students expected the old common question "was it half empty or half full?" But to the surprise, he asked them "How heavy is this glass of water?"

The answers given by the students ranged from 7 oz. To 25 oz. But the professor replied that the actual weight of the glass with water doesn't always matter but how long you hold the glass is what matters.
If you hold the glass for a minute, you won't feel much weight. But if you hold for 10 minutes, you will feel a little more weight and it gets heavier for you with hours.
If you hold it for the entire day, then your hands would go numb and pain. Similar is the case when you carry stress with you. If you think about it for a while and leave it, then there is no problem but if you think about it for hours, it starts becoming a problem and it becomes worse if you sleep with it.
Outcome: Moral: You should learn to let go of your stresses and never sleep with it. If you can do something about it, just do it. In the other case, just leave it and work towards your goals or else it just kills your productivity.

Activity 2: QUECUSSION- Ever played 'Jeopardy!?' Then you're ready for Quescussion
Objective: It's like a standard class discussion but only questions are allowed. Student giving statement as a response shall be eliminated. These questions can help in shaping your course and allow you to gain deeper insights into student learning.

Example: Why are Indians considered to be good in IT? Then someone else states: Don't you think it's not about nationality but about the education system in a particular country?

Activities for Revision and Tutorials

Activity 1: Pair- Prepare - Share (PPS)
Objective: Active- collaborative learning - This activity can be exploited for the revision of complex and important topics where each team can be given a topic which they will prepare and present in the class.
Outcome: Team giving best presentation shall be given yellow star.

Activity 2: Review List
Objective: Reinforced learning - Routine feedback on the curse learning so that doubts can be addressed in time.
Example: Ask students to drop a message or email for what they wish to repeat and then consolidate the list and discuss those topics afresh or by triggering questions.

PRE-READS: PC Quest, Computer Word, Innovation and Tech Today, FlipHTML5.com, Allyoucanread.com, The Biography of Bill Gates.

Call for Articles

At Chitkara University, the endeavor has always been to hone the skillsof learners. Keeping in line with this tradition, the Department of Computer Applications, Chitkara University, Punjab had come up with an online magazine titled **Wall for All**. This magazine was proposed to provide a platform to the budding learners to share their knowledge and general information pertaining to the computing field. **Wall for All** is available for free download in PDF format from CA departmental website: *ca.chitkara.edu.in*.

The students and faculty members are invited to be a part of this venture and contribute their articles to the magazine. The students may forward the articles through their respective mentors while faculty members may send the same directly to the editors of **Wall for All.**

Blockchain: A Revolutionary Technology

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The word 'Blockchain' is highly searched keyword on Google these days. In this mini tour the readers will know the reasons behind its popularity. Blockchain works on distributed peer-to-peer network to store transactions or any other data that cannot be tampered later [1]. Technically, it is a chain of blocks where each block is linked to the previous block with a unique SHA-256 hash key. This chain of blocks is also known as distributed immutable ledger as it is distributed over the peer-to-peer network. Even though tampering of this ledger is impossible but still imagine if somehow it is tampered on a single peer then rest of the peers on a distributed network will discover soon that one of the server is having a tampered ledger and in such case the ledger on compromised server will be replaced with the exact ledger. As a result, blockchain offers an environment where information is secure and transparent. It also offers traceability which is very useful in discovering payment histories. Figure 1 is demonstrating how a block is added into a blockchain. The first step is to create a wallet and initiate a transaction. A block is then created which can hold approximately 2100 transactions. This block is then broadcasted to every single peer over the network. These peers then validate this newly created block through a consensus protocol. To add a block 51% of peers must mutually agree. Finally, the block is added.

There is a myth among people that blockchain is only designed to record and discover crypto-currency transactions. The fact is that blockchain is now everywhere. Some of the key applications are maintaining patient history, buying and selling property in a secure and transparent manner, online voting, public donations, supply chain management, maintaining asset registries, securing IoT devices and many more.
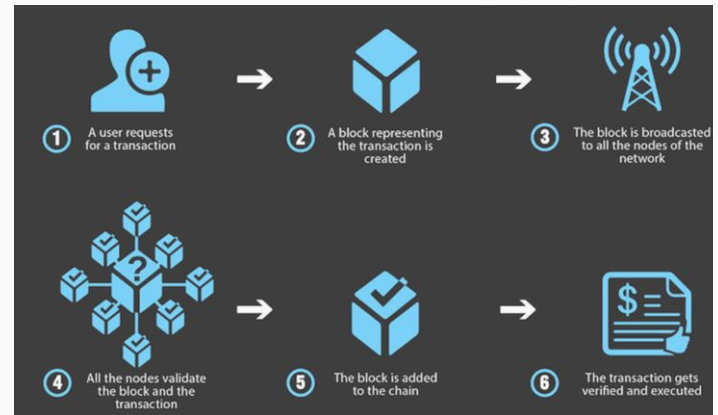

Figure 1. Steps involved to add a single block into blockchain [2]

Blockchain can be public, private or hybrid. In a public blockchain anyone can join the network but in contrast private blockchain can only be joined by authorized people. Hybrid blockchain provides the flexibility to shift to private or public blockchain as and when required [3][4].

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Cryptocurrency in India

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In this article we have taken a look at this thing, how much is impact of bitcoin in India: and what is its role India is the technological age, Techno-Indians keeps bitcoin, invest and speak for investment. One of the most popular word used by the world "Criptocurrency "it is also known as internet currency. It is a virtual currency used in the internet world.

"A cryptocurrency is a digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. Many cryptocurrencies are decentralized networks based on blockchain technology—a distributed ledger enforced by a disparate network of computers. A defining feature of cryptocurrencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation."

Cryptocurrency is very popular in the world but in India it is not popular because of there are still people in India who do not know about virtual money. As the market of e-commerce is increasing, the sales of internet are increasing in the same way. There is a huge market of e-commerce in India. Virtual money is still van in India. Bitcoin was introduced since 2009 which was used in online transfer. Financial institutions bridged the gap between sales and buyers. They acted as a world-class third party for processing e-payments. Even if the gap was effectively bridged, there was always a dependence on the business activities of both buyer and seller. This dependence becomes the factor responsible for the invention of the cryptocurrency. Bitcoin is a coin that does not pose any risk to any government or legal authority. That's why bitcoin is a boon for Indians and a bane to India.

According to market research website CoinMarketCap.com, more than 10000 different cryptocurrencies are publicly traded. And the proliferation of cryptocurrencies continues, raising money through ICos or initial coin offering. According to CoinMarketCap.com, the total value of all cryptocurrencies as of 27 May 2021 was over $1.7 trillion, down from an April high of $2.2.
Best Cryptocurrencies by market capitalization- By market capitalization there are 5 biggest trading cryptocurrencies.

S.No	Internet Currency	Size of market
1	Cardano	$54.6 billion
2	Binance coin	$57.5 billion
3	Tether	$61 billion
4	Ethereum	$324.2 billion
5	Bitcoin	$735.3 billion

In this article an attempt has been made to find out This article has tried to find out whether there will be any financial benefits from the use of bitcoin in India. Why india sould allow use of bitcoin.The making of this object is to create the new bharat to have well accepting towards the Cryptocurrency, Laxmi Coin, Bitcoin.

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Bitcoin a peer – to – peer Electronic Cash System by Satoshi Nakamoto

Completely Automated Public Turing Test to tell Computers and Humans Apart

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There are varieties of malicious threats which can be employed by the attackers for the malicious activities. Therefore, it is considerably necessary to protect your computer through any secure application which provides protection against such sorts of threats. Nowadays, Bots are used by attackers to compromise the data of your machine. The CAPTCHA program judge the activity of the other person. If the user fails to pass the test, then he/she is considered to be a machine. Therefore, CAPTCHA protects our websites/ blogs to be accessed by an authentic human only. Thus, a CAPTCHA test must tend to make sure whether your website or blog is getting used by a human or a bot. CAPTCHA was invented in the year 2000 at Carnegie Mellon University by John Langford, Nicholas J. Hooper and Luis Von Ahn.
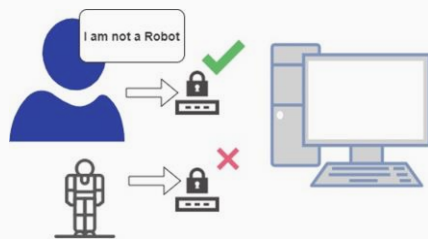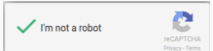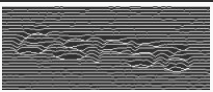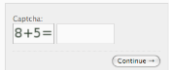

Figure-1 Use of CAPTCHA to distinguish between Man and Machine

As depicted in Table-1, CAPTCHA comes in various types with a purpose to distinguish between human and bot. They have their own merits and demerits for example it is very difficult for a visually impaired person to read the CAPTCHA and respond. Therefore, sound based CAPTCHA may be used but if it is not provided in the user's native language then again it is of no use.

Nowadays, some developers are developing websites for the visually impaired persons therefore the research community has contributed in this way to generate CAPTCHA for the blinds, but still, there is large scope of improvement in this way.

HOW CAPTCHA Works: In 1950s Alan Turing through Imitation Test proved that computers cannot think like a human. Hence through a CAPTCHA program some distorted characters are shown to the user and ask them to type or give the response in a stipulated time. Being a human it is very easy for us but for a computer program it is very difficult to pass such test. Although some advanced bots are able to identify the images by applying machine learning algorithm.

Text-based : User has to identify the correct text	
ReCaptcha: Free service from Google to protect your website	
3D : In comparisons to text based CAPTCHA it provides enhanced protection	
Mathematical: Require input from user based upon simple arithmetic operations	
Image-based: Few low vision or blurred images are shown to the user and he/she has to identify the correct image	
Audio-based Differentiate between human and synthetic voice	

Software-defined Networking (SDN): A Programmable Network

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The significant growth of Internet due to emerging mega trends such as cloud, social networking, mobile computing, big data etc. demands for high bandwidth and speed than ever. So, one immediate solution is to deploy more networking devices to boost the capability of existing computer networks. However, the extension in network infrastructure increases complexity a. The networks are huge in size as well as highly heterogeneous as the applications, services and equipment are provided by different vendors, providers and manufacturers. Moreover, to enforce the preferred high-level policies, the network operator needs to configure each network device separately using low-level and often vendor-specific commands. Although, many solutions had been introduced by the networking research community after noticing aforementioned problems including, programmable networks, Named Data Networking (NDN) and Software-Defined Networking (SDN).

Amongst the available systems, SDN (Software-defined Networking) has been claimed to be a revolutionizing paradigm shift in networking that gives assurance to make the networks programmable, flexible and dynamic in order to provide a relatively easier management and reduce complexity. The major idea of SDN is to separate the network's control logic (control plane) from the network routers and switches (data plane). The network switches change to simple forwarding devices responsible for the packet forwarding based on the rules installed by the centralized controllers. The controller supervises the whole network; provide feedback with better decisions based on the global network view.

According to ONF (Open Networking Foundation) [1], SDN's definition is- "In the SDN Architecture, the Control and Data Planes are decoupled, network intelligence and state are logically centralized, and the underlying network infrastructure is abstracted from the applications". Software-defined Networking Model (shown in Fig.1.), consists of three layers [2]:

1. *Infrastructure Layer (a.k.a. Data Plane)*: This layer consists of networking devices (e.g. switches, routers, etc.) that are responsible for forming underlying network to forward network traffic. These devices store the information of network status (e.g. network topology, traffic statistics, etc.) and send it to the controller. Also, it processes the packets based on the rules provided by the controller.
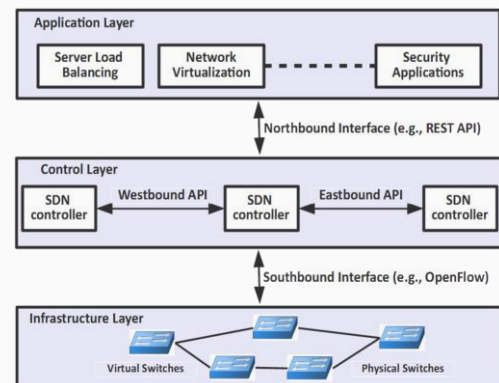

Figure 1. Software-defined Networking (SDN) Reference Model [1]

2. *Control Layer (a.k.a. Control Plane)*: This layer consists of one or more software-based SDN controllers for providing the control functionality through APIs (Application Programming Interface). The APIs controls the network forwarding behavior of devices through an open interface. A controller interacts with infrastructure layer using southbound interface and with application layer using northbound interface. For longer network domains, multiple controllers exist and these controllers interact with each other using east-west bound interface to coordinate their decision making processes and sharing of network information.

3. *Application Layer*: This layer mainly consists of end-user business applications. The end-user business applications access and control the switching devices in the infrastructure layer by using the programmable platform provided by the control layer. Examples of such applications include server load balancing, network virtualization, security applications and many more.

Data Flow in Software-defined Networking

The controller communicates with switch through an interface protocol to manage the switches and hosts connected to the switches to perform tasks, e.g. to request resources, to configure the network according to administrator, etc. The widely adopted popular standard of SDN interface is OpenFlow [1]. The controller communicates with OpenFlow switch through an OpenFlow protocol. The OpenFlow switch accommodates two layers- hardware and software layer. The hardware layer incorporates switching application-specific integrated circuit (ASIC), responsible for tasks including buffering, forwarding, etc. Each switch acquires a flow table (one or more), each flow table contains set of flow rules (define how to process packets). The software layer accommodates an OpenFlow Agent (OFA) running as a user-space process on top of the lightweight Operating System (OS). OFA is responsible for the interaction between the OpenFlow switch and the controller using the OpenFlow protocol. An OpenFlow switch works reactively for flow installations, by default. An example of reactive flow installation in OpenFlow SDN is shown in Fig. 2.
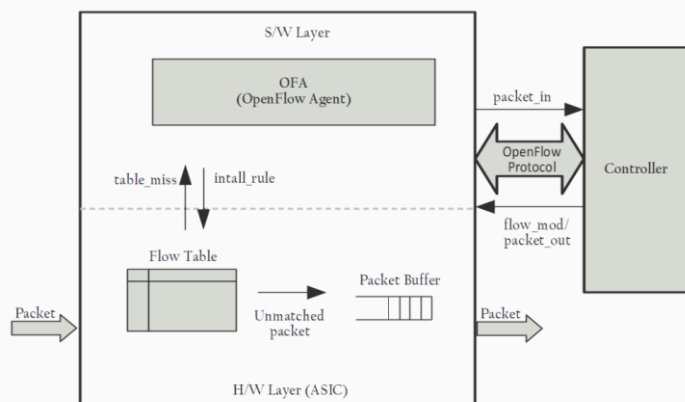

Figure 2. Network Flow based Policy of SDN

The hardware layer of OpenFlow switch receives a packet and looks up the flow table using the packet header information and input port. If no entry exists corresponding to incoming packet in flow table, then the packet will be considered as a first packet of the new flow and the table_miss event is generated in the OFA. OFA stores the packet in packet buffer and encapsulate whole or part of packet information (i.e. header of the packet) to a flow request (i.e. packet_in message) and sends to the controller. When the controller receives the packet_in message, it makes routing decisions (i.e. compute set of flow rules) based on encapsulated information and reply with flow_mod message to the switch containing flow rules and the duration (timeout value) to keep the flow rule in the flow table. The possible timeout value of every flow rule can be soft or hard. Soft timeout value sets off when the flow remains inactive and hard timeout value sets off at the timer expiry. Also, the controller sends packet_out message to inform the switch to free the buffered packet. When a switch's OFA receives a rule from the controller, it checks the flow table's memory. In case of space availability, the flow rule is inserted into the flow table and when the time expires (either soft or hard timeout), the entry is deleted from flow table and flow_removed message is sent to the controller. In case of space unavailability, the rule is dropped and an error message is sent to the controller.

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Intel v/s AMD

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Silicon 'War'

Companies like AMD, Intel and Apple have been competing with compelling products and lower prices. Coming up with new products with different architectures while dealing with the global silicon shortage has been pretty frustrating for them. Even Apple, which was using Intel-based processors for 14 years wanted in on the competition.

The Problem

Companies are just releasing product lines with new features and too many choices for the same need have made people confused. For a normal consumer in India, if they spend more than ₹50000 on a laptop, they expect it to last at least 5 years without a hitch. Given that the base-spec MacBook Air(M1) costs 92900, it's clearly not the option for average consumers in India as the base-spec won't even be near the specs of a regular Windows-based laptop costing the same or even less.

The 'M1' Magic

Apple M1 Logo

For Professionals who are into the "Apple Ecosystem" already, you may not have a lot of options, considering that you have to stick to Apple products to get the best out of Mac OS. Apple's M1 series chipsets are based on a 5 nm Architecture (8-core CPU) and come with on-board graphics which are comparable to GTX 1650 offered by NVIDIA. For someone who has to stick to Windows, M1 chipsets aren't quite as good (Mostly Gamers because you just can't game on a Mac!).

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The Challenge

So let's talk about AMD and Intel, Over the past couple of years, Intel has ruled the Consumer market for desktop and mobile processors and AMD was the first company to go head-to-head with the Big Fish. So let's talk about the 'Windows Silicon War'.

Intel Tiger-Lake Processor

Intel Chipsets (The Big Fish)
Pros 👆

1. Higher boost clock speeds
2. Better compatibility
3. Wider community support
4. More chipsets with on-board graphics as compared to AMD
5. Better virtualization support
6. Better compatibility with various memory channels and various motherboards
7. Thunderbolt support

Cons 👎

1. Higher power consumption
2. Lower battery life in laptops
3. Higher costs
4. Still based on 10 nm Architecture while AMD is using 7nm and Apple is using 5nm.
5. Higher temperatures in mobile chipsets.
6. Clock speeds are not sustainable for longer durations.

AMD Ryzen 7(Desktop)

AMD Chipsets (The Contender)
Pros 👆

1. Sustainable clock speeds for longer durations
2. Lower temperatures when compared to Intel chipsets.
3. Lower Costs
4. Lower power consumption

5. Better Battery life in mobile CPUs
6. Uses 7nm architecture

Cons 👎

1. Less availability
2. Retailers charge more than MRP at times.
3. Less brand recognition.
4. Only few motherboards can take advantage of all the features.
5. Only thunderbolt 4 support on few motherboards

How to get the benefit?

To be fair, if you want to buy a laptop or desktop, wait for the 11th Gen chipsets and then compare your needs with the products from AMD and Intel.

If you just want to use a laptop or desktop for normal day-to-day MS-Office, normal coding and Netflix, on a low budget, you can opt for AMD Ryzen 3(3000 series, 4000 series and 5000 series) series or Intel i3 chipsets (8th, / 9th / 10th /11th gen recommended). If you do not want to play games, you can definitely opt for the M1 chipsets from Apple.

If you want to use it for Android Studio or Playing video games (casually) apart from all the work/studies, you can buy a laptop for productivity equipped with an i5 or i7 from Intel. Make sure it's not the U series processors in Intel, they are not meant for workloads (for business laptops they are fine) and might not be able to cope up with a workload or you could choose AMD Ryzen 5 or 7 series chipsets (3000,4000 or 5000 series chipsets). You can also opt for the M1 MacBook Pro if you have this kind of a use-case for your machine.

If you want to use your machine for serious workloads like crypto-mining or 4K gaming(and streaming) or scientific calculations, you might want to consider i9 from Intel and Threadripper or Ryzen 5960X from AMD as they offer quite a punch when it comes to performance CPUs. Tech-enthusiasts are love them.

Conclusion

The competition between these companies is forcing them to compete at lower and lower prices for their products and considering the fact that a company finally stood up to the monopoly of Intel and charging more than enough for the same products and what do we know, one day, we might as well be able to 'Game' on a Mac.

Call for Articles

At Chitkara University, the endeavor has always been to hone the skillsof learners. Keeping in line with this tradition, the Department of Computer Applications, Chitkara University, Punjab had come up with an online magazine titled **Wall for All**. This magazine was proposed to provide a platform to the budding learners to share their knowledge and general information pertaining to the computing field. **Wall for All** is available for free download in PDF format from CA departmental website: *ca.chitkara.edu.in.*

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React ⚛ Native – falling or winning?

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React Native is an open source Framework introduced by Facebook in March 2015. It is used to Develop Hybrid Application (Android and IOS) in single code.

The initial release of React-Native was met with unenthusiastic reception in the developer community. Like many first-generation products, plugins required to extend its Functionality were missing, and the out-of-box functionality was pretty minimal.

Big Departures –AirBnB & Udacity 💵

About the time of the licensing uproar, two prominent advocates, AirBnB and Udacity, announced that they are moving away from React-Native after being big proponents of Facebook . Coincidence?

Pros / Cons

Pros 🤙

1. Faster to Build
2. One Framework, Multiple Platforms
3. Fast Refresh
4. Smaller Teams
5. Fast Applications
6. Simplified UI
7. Large Developer Community

Cons 💪

1. Compatibility & debugging Issues
2. Lack of Some Custom Modules
3. Native Developers Still Needed

React Native Vs Flutter & Dart 🎆

⚛	Flutter
March 2015	December 2018
Facebook	Google
Less Github Stars	More Github Stars
Free & Open Source	Free & Open Source
No Web Apps	Can build Web Apps
Large Community	Small Community
42% market share	Approx 40% market Share

Question of the hour

As we all Know, Flutter is the only major competition to React Native. React Native Ranks higher with 13.1% and Flutter with 6.7% among most wanted frameworks but still why it is being neglected and is constantly falling down is really the question of the hour…

Is React Native actually drowning? 📊

When React Native has so much to offer to use then why it is being neglected? and how? Well, Here are some possible reasons :-

1) f Facebook's crisis with Apple

Facebook says Apple is attempting to push free apps, which often sweep data up and feed it to advertisers, to move to subscription models. Apple, through its App Store, collects a 30% cut of in-app purchases, which critics dub "the Apple tax".

2) Outdated and Deprecated NPM Packages 📦

NPM (Node Package Manager) the biggest Hub of Packages over 1.3 million packages, but now a days the major collection of packages is getting outdated and deprecated, this is leading to malfunctioning in the features we need. As being the both Flutter and React-Native Developer I am facing this quite a lot in my Projects.

3) Lack/Delay of API support 👏

React Native provides a number of built-in Core Components to use in your app. But after the Clashes of Facebook with apple and Rising of Flutter and Dart in Market, there are some delay of API support in Core Components of both IOS and Android. Like Android 12 Support and IOS 14.5 Support is delayed for a month as Flutter has the support of them both.

4) Rise of Flutter & Dart 📈

Flutter got a huge support from Google and its Developer Community is rising day by day. Flutter is the biggest competitor of React Native in today's market. This is leading to changing of Technology stack of Mobile Application Developers. Personally I love them both but I am seeing it too that Flutter is quite better than React Native

What's the Future? React Native or Flutter?

More and More companies are attracted by Flutter. After all, we are witnessing monthly improvements in the Flutter SDK as Google continues to refine its tool. And Even the Developer community of Flutter is rising Day by Day. Flutter enables us to create not only mobile applications but also apps for the Web and Desktop.

As for React Native, well Facebook is currently focusing on a large-scale re-architecture of the technology. The team is doing its level best to improve support for both React Native users and the wider community. And thanks to this, the community can now easily suggest changes to the framework's core functionalities through an RFC process that uses a dedicated Github repo.

Our Views

React Native is in Downfall but It can be managed and can get back to track if focused properly not just on competitions but on the framework itself. Being a Full Stack Developer. I have added React Native in my Mobile Application Stack, I was working on React Native, I just switched my Mobile Application Stack to Flutter. And I must say I can see and feel the difference. But I prefer working on Both. React Native is quite easier then Flutter if someone wants to step themselves into Hybrid App Development. For React Native you must have worked on Javascript and for Flutter you must have worked on Dart programming language. I am not here to differentiate both, I am just sharing my reviews. There are some aspects where React native is much better than Flutter while Working. Like Navigation, setting up the Navigation between pages of the Application is quite tough. But in the case of Flutter, it's just a 3-4 lines of Code.

Conclusion

In a Nut Shell, the only solution to this major issue arising can be paying and investing more in React Native rather than putting all the focus in other Frameworks. React Native can get much better and it will get much better soon.

Learning new frameworks is not bad. Flutter is pretty awesome and it is giving tough competition to React Native but we can't say that Flutter is beating React Native. Learn them both and you can become Quite a Great Mobile Application Developer. In the end I would say it totally depends upon the Project I would not recommend you what Framework to work on. I am not Team Flutter and not on Team React Native, I prefer them both. I will work on both of them.

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CHITKARA UNIVERSITY

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EDITORIAL SECTION

At Chitkara University, the endeavour has always been to hone the skills of the learners. Keeping in line with this tradition, the Department of Computer Applications, Chitkara University, Punjab, has come up with an online magazine titled Wall for All. This e-magazine is proposed to provide a platform to the budding learners where they can share their knowledge and also the general information pertaining to the computing field. This e- magazine also provides an opportunity to the faculty members to share their ideas and views on topics of general interest. Wall-for-All is available for free download in PDF format from departmental website ca.chitkara.edu.in.

We hope to get due feedback from our readers which can help us in improving our further issues.

HAPPY READING
&
Wish you a very Happy New Year

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