

Encode IT

E-Newsletter

Vision:

To be a pre-eminent information technology programme that empowers girls to meet the dynamic demands of Industry & society.

Mission:

- To provide quality education with best resources to achieve academic excellence.
- To create favorable environment that inculcate self learning, soft skill and adaptability to latest technology.
- To develop competent professionals having highest ethical values and commitment towards the society.

Message from Head of Department

Dear students, colleagues and alumni

I am very happy that our Information Technology department is releasing 3rd issue of volume: 4, quarterly e-news letter "Encode IT" where we are sharing some of the important news over the past three months. I take this opportunity to thank our staff editorial team for their great effort to make this news letter. I also invite the readers of 'Encode IT' for their contribution and suggestions for the forthcoming issues.

I welcome newly admitted student in our department for academic year: 2022-23. I would like to congratulate all of you and extend my best wishes for your bright future.

Good Luck.



Mrs. Jigna J Desai
Head of Department,
Information
Technology
Department

Dotnet Framework Development



Ms. Zankhna Patel
Lecturer,
Department of
Information
Technology

What is .NET Development Framework?

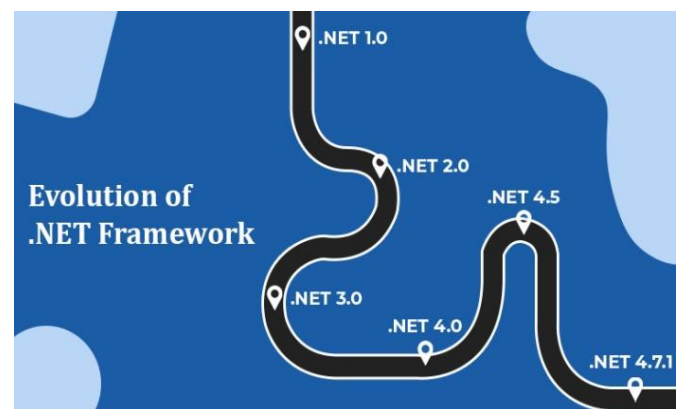
Back in the year 2001, is the year when Microsoft launched the dot Net framework for businesses to develop cutting-edge applications. The first version of .NET was version 1.0. It is a software development framework used for creating and operating all types of Windows-based applications. It is used by the developers to create web, Windows, Windows Server, Windows Phone, and Microsoft Azure applications. The Net framework is made up of developer tools, programming languages, and libraries that may be used to create desktop and web applications. It is one of the safest and fastest ways to develop high-performing websites, web services, and games.

Initially, the .Net development framework was designed to allow developers to develop programs that would operate just on the Windows Platform. After the first version of Net Framework, there were many such versions launched by Microsoft Corporation. The latest one is Version 4.8. Now, there are two types of .NET development frameworks available in the market- the .NET and

dot NET core framework. Both these .NET versions have a great future and the reason behind it is because it supports almost all types of programming languages.

The major supporting languages are C# and Visual basics but it is a fact that they support 50+ languages and are hence considered as a versatile app development framework. There are no restrictions in the .NET development framework as you can use it for form-based and Web-based apps. Microsoft .Net framework is a multipurpose development platform that can also be used to create web services.

Evolution of .NET Framework



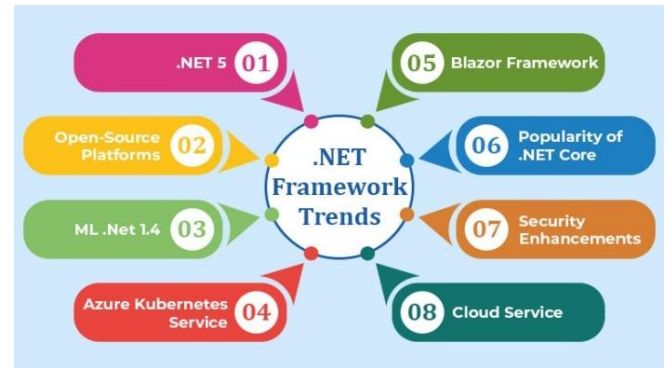
As we are already aware of the fact that the .NET framework was introduced by Microsoft in the year 2002 and later this technology has evolved as the most convenient and faster app development methodology. .NET being a valuable and effective tool has the largest class library which can help developers easily develop any app using any language. Its interoperability and scalability make it one of the common runtime languages to implement any program using any given language.

If we retrospect the events, Microsoft actually started developing .NET in the 90s when they were working on the Next Gen windows series. Then since the launch of next-gen got delayed so was the release of the beta version of the .NET framework delayed. Then late in 2002, the expected version was launched. The first version of .NET was compatible with Windows 98, Windows XP, NT, and 2000. It was developed focusing on key features of object-oriented web development and DLL libraries.

Later on, with advanced features and convenient facilities, they developed other versions too succeeding the version 1 there was version 1.1, .NET framework 2.0, version 3.0, version 3.5, version 4.0, version 4.5, 4.6, 4., and then the latest release of the most reliable version 4.8 was in April 2019. Don't worry about migrating because the process of migration from ASP.NET to .NET core is quite a hassle-free task.

Many companies are blindly hitting the spot when it comes to .NET development because of the trust and proven results so more and more businesses are showing interest in its utilization. We must also know what trends make .NET stand still and yet ahead of other developing frameworks. Therefore, let's start digging into the latest game-changing .NET trends of the development market.

Top .NET Development Trends



1 .NET 5

The developer's community is swayed away with the features the .NET MVC framework offers. And then with the launch of the new version of .NET 5 which clearly says that the future of .Net is quite bright. .Net 5 is one the finest frameworks used by .NET developers in 2021. It is more preferred because it allows them to convert their existing apps into rich-featured UI using Blazor framework. Not only that, but it also provides a migration path to the Angular, Vue SPA, and React frameworks. Don't worry if you're unsure how to use it for development! There are several videos on the internet. Not only that, but you may get advice from specialists via internet forums. Also, every size of business uses it and especially larger corporations have opted for it.

Net 5, which includes UWP, WPF, and Win-forms. The remarkable attributes are the reason for its appeal. Net 5 is in possession. This technology, however, only enables desktop applications that operate on Windows. Here are some features that make .NET 5 distinct from other versions.

Net 5 provides the following services:

- The entity framework core, EF Core, will eventually replace EF 6.
- ASP.Net Core MVC is a hybrid of ASP.NET MVC and Web API.
- MSIX: A new desktop application packing tool that superseded the MSI package installer.

- `JsonDocument`: The `Json Document` library replaces `System.Text.Json.JsonDocument`.

2. Soaring Open-Source Platforms

There is a unique and different aspect about the .NET development framework that it governs apps with an open-source platform. Microsoft has historically been closed with revelations like these. But lately after the release of many other open-source platforms, students can comprehend that the open-source technologies will increase with the popularity of structure like .NET core. The pattern has already accelerated and will further do in 2021, with the public release of numerous more Microsoft versions. The large industry tolerance for such products will promote more improvements.

3. Machine Learning .Net 1.4

One of the most unique updates in .NET app development is the introduction of a Machine learning element in the latest update of ML 1.4. This feature enables the user to use a command-line interface and model builder program to help your business build and own an automated Machine learning model. If it's anything connected to the deep neural network, now .NET developers can also build that too with the help of command line interface (CLI) and model builder. Machine learning models can use languages like C# and F# without the need of moving to any other platforms other than .NET. This function is therefore added to the .NET function.

ML.NET allows you to reuse all of your existing .NET developer knowledge, skills, code, and libraries to effortlessly incorporate machine learning into your online, mobile, desktop, gaming, and IoT products. You have added a new customer base with the help of this version of .NET. It is proactive and allows you to analyze sentiments and make image classification using DNN (Deep Neural Network) retraining with GPU support (GA release)

which is not possible with regular .NET apps. This newer update will allow you to track sentiments and make sales predictions using the analysis, reports and data turned into information.

4. Azure Kubernetes Service

Azure Kubernetes Services are entirely managed and highly available Kubernetes services that make it easy for programmers to develop containerized web applications. The programmer may also get serverless Kubernetes and continuous delivery knowledge, as well as enterprise-grade security and governance.

By default, Kubernetes is a developer-friendly environment where it allows all functions from designing, testing, and deploying microservice-oriented solutions. It also adds up to a significant amount of manual work. To address the issue, Azure cloud solutions deliver crucial features that make them more productive and comprehensible to developers. Let us now look at what it has to offer developers:

This gives developers a quick end-to-end application development experience, in addition to the tool integration choices. ASP.NETDevOps, Web API, data models, and more are among the fantastic tools and frameworks available in Azure. It helps to give access management utility with Azure directory and enhanced identity and rules enforcement across all clusters.

5. Blazor Framework in C#

As we know, C# is a language used in .NET development that can help you work on both types of client-side and server-side scripting. The latest development with Blazor added to C# shows you can work on any web assembly using C# as your programming language. Blazor allows you to use an incremental DOM approach and if you are using virtual DOM then there is Javascript in the background.

Blazor is also a free, open-source framework that helps build amazing web apps by using some of the most popular programming languages like C#, Razor, and HTML. If you are using Blazor, you are enabling developers to create interactive user interfaces in C#. Now that we know C# is used to build client and server code, it makes it easier for developers to exchange libraries and code. It does not require any additional plugins or add-ons to function.

This makes it much more intriguing to observe how developers will write for the web in the future.

Blazor has the following characteristics:

1. Performs routing and develops simpler layouts
2. Apply forms and validation
3. Blazor also offers an Injection of dependability
4. JavaScript compatibility
5. Rendering on specifically Server-side
6. It does not require any additional plugins
7. Blazor is compatible with all contemporary web browsers, as well as mobile browsers

6. The Popularity of .NET Core

The .NET Core, one of the .Net trends is anticipated to continue in 2020 and is one of the best frameworks for web application development. This framework consists of features like AOT, GC, Runtime, JIT, Base Class Library, ASP.NET, C#, ML.NET, VB.NET, F#, Entity Framework, WinForms, WPF, and Xamarin. Because of the small size of .NET Core 3.1, it is perfect for cloud installations. It accelerates JSON writing and reading and supports HTTP/2 making it easier for developers to port desktop applications to .NET Core. However, Net 5 will only have one installation. .Net Core 3.1 has been declared as the final version that will be split from the .Net products.

7. Enhancements to Security

The code access Security aspect in .NET gives you a lot of advancements when it comes to web development frameworks. Hence, whenever you are developing a software application you need to look at its security features first. The security aspect is one of the most disregarded aspects of web development. It will alter the results of the improvements of .NET and the enhancements will make it to newer versions in 2022. Finally, .NET will be in one of the most secure phases, with improved structure approvals and code checks. The encryption will also be improved, so the developers and you will not have to worry about the information getting leaked from any site.

8. Cloud Service

Introduction to any cloud service is no longer a revolutionary move. Big data has been there for a long and its huge storage capacity has made the world of business wonder what to do. But ever since the evolution of the cloud took place, all pains about storage have vanished. It is incredible how it allows users to access their papers, tools, and data from everywhere and grow their corporate landscape in ways that were never previously imaginable. Finally, it provides the big data, artificial intelligence, and data analysis technologies needed to explore future prospects. Many companies like Microsoft Azure, Google Cloud or AWS are leading this race of providing the best cloud storage services.

Conclusion

Microsoft designed and developed .NET applications has been thriving in the world of technology with its new features and commercial release. NET as an application development platform has evolved into the minds of the developers and have been emerged as the face of numerous web applications. Whether you want to develop dynamic websites, interactive mobile app, or business intelligence applications, modern web browsers .NET provides all the capabilities you

need to make your programs more secure, dependable, and scalable. There are many .NET development companies available in the market and so you must seek out a trustworthy partner to handle your application development. These companies will let you absorb all the benefits of the dot NET framework and utilize its trends using strong and robust web applications at an affordable cost.

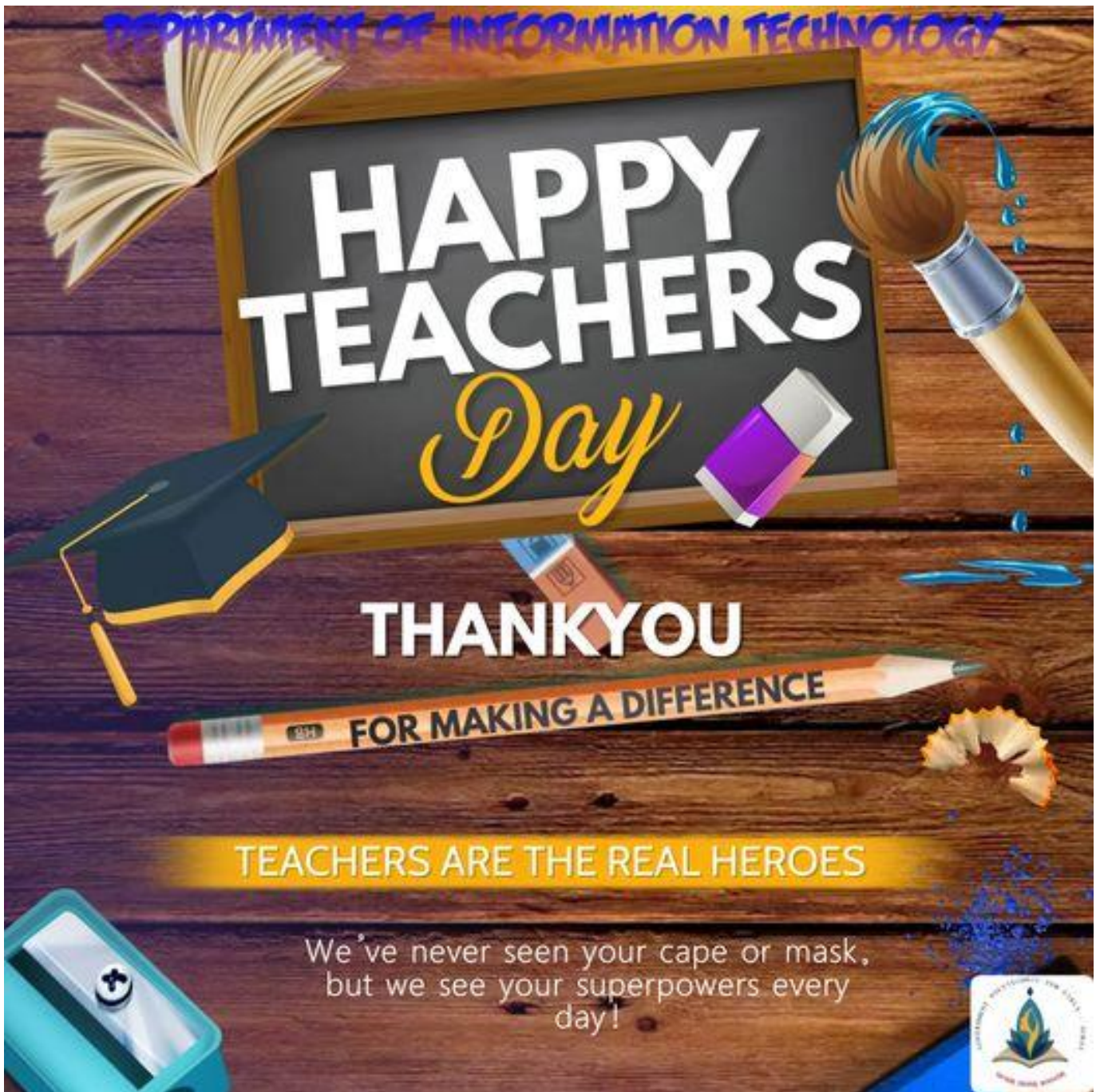
References:

<https://dotnet.microsoft.com/en-us/learn/dotnet/what-is-dotnet-framework>

<https://www.guru99.com/net-framework.html>



Teacher's Day Celebration



The influence of teachers extends beyond the classroom, well into the Future..

On this auspicious day, department is grateful to all the teachers for their valuable contribution to the society.

Wishing all the Teachers a very Happy Teachers Day!!!!

Toppers of 6th Semester



1



SHAH SHIVANI HEMENDRABHAI

SPI : 10.00

2



**DESAI VAIDEHI
SATISHBHA**

SPI : 9.82

3



**JARIWALA DINKAL
CHANDRAKANTBHA**

SPI : 9.61

3



**MODI HETVI
MEHULKUMAR**

SPI : 9.61

Congratulations to all the Final year students for achieving wonderful results...

Wish you all the very best for your future endeavors!!!

End Semester Exam: Summer -2022 (Top 3 students)

Sr.no.	Enrollment No.	Name Of Student	Rank	Semester	SPI
1	196150316069	SHAH SHIVANI HEMNDRABHAI	1	6	10
2	196150316009	DESAI VAIDEHI SATISHBHAI	2	6	9.82
3	196150316016	JARIWAL DINKAL CHANDRAKANTBHAI	3	6	9.61
4	196150316034	MODI HETVI MEHULKUMAR	3	6	9.61

Puzzles

1. If January 1, 1996, was Monday, what day of the week was January 1, 1997?
2. A shopkeeper sold an article for Rs. 2500. If the cost price of the article is 2000, find the profit percent.
3. A running man crosses a bridge of length 500 meters in 4 minutes. At what speed he is running?

Previous Newsletter's Puzzles Answers

Q1: 200

Q2: 216

Q3: 630 rupees

Student Corner



Borsaniya Vruxali
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Technology

Believe in yourself and in your dream Though impossible things may seem
Someday, Somehow you'll get through To the goal

you have in view

Mountains fall and seas divide

Before the one who in his stride

Takes a hard road day by day

Sweeping obstacles away

Believe in yourself and in your plan

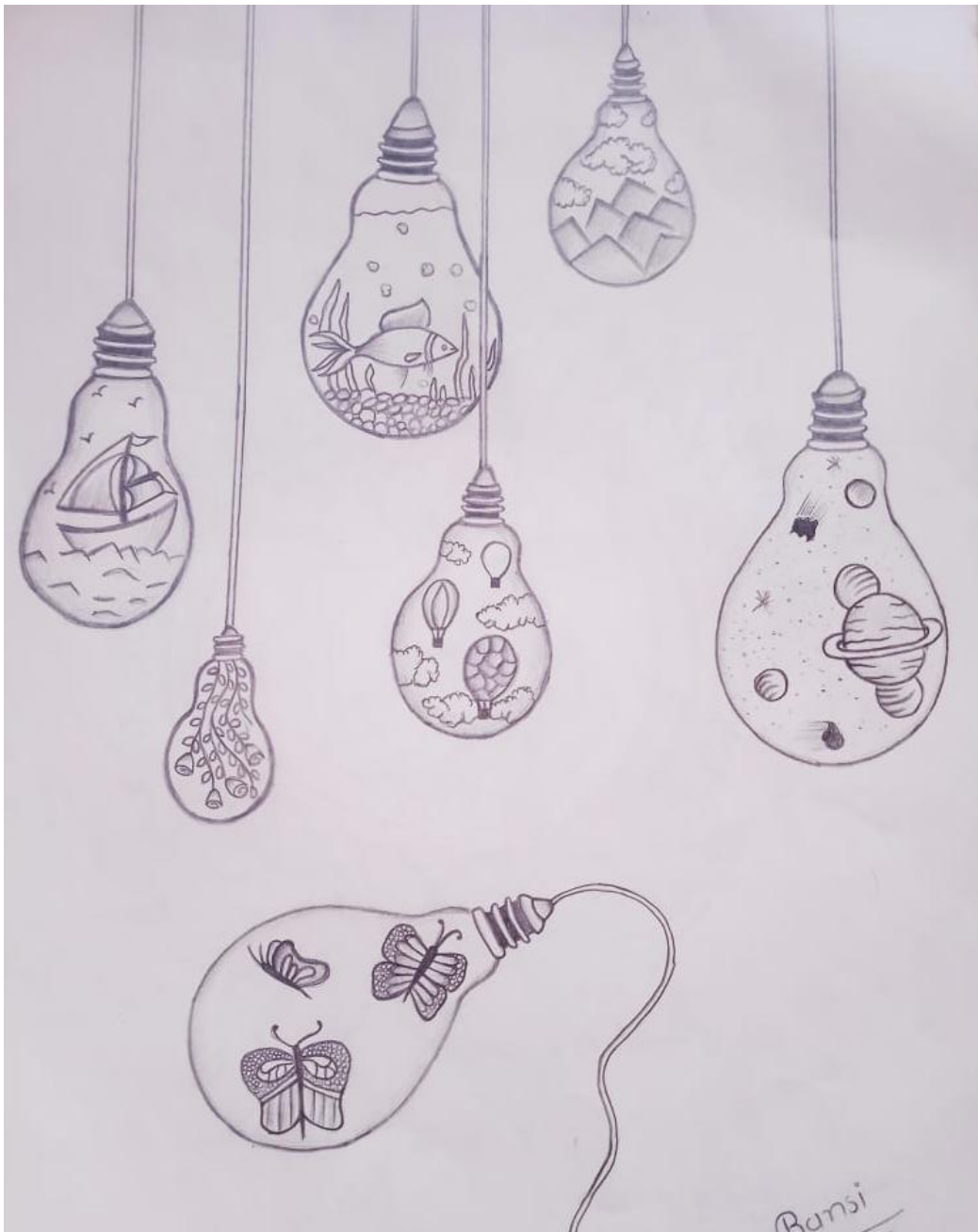
Say not - I cannot - but, I can

The prizes of life we fail to win

Because we doubt the power within



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