



Government of India

Ministry of Electronics and information Technology

National Informatics Centre, Himachal Pradesh, Shimla

Technical Presentations by NIC HP Officials: 04-May-2024

As part of an ongoing series of 10-minute technical talks presented by NIC officials of their choice on a regular basis, the recent technical session held on 04-May-2024.

State Informatics Officer, Himachal Pradesh reviewed the randomization process to be used in the elections and directed all District Informatics Officers to ensure that this task is completed within the specified timeframe. He sought opinions/ suggestions from all officials of the NICHHP, regarding the activities being undertaken by Himachal Pradesh. Additionally, he reviewed various activities being undertaken by the NICHHP and provided instructions to officials related to their activities.

The details of the presenters, along with their topics and ratings, were as follows:

S.No.	Name	Designation	Topic	Rating (5.0)
1.	Sh. Vijay Kumar Gupta	Scientist-F	UPI	4.6
2.	Smt. Vandana Sankhayan	Scientist-C	Search Engine Optimization	4.6
3.	Sh. Bhupinder Pathak	Scientist-F	Blockchain	4.7
4.	Sh. Jagdeep	Scientific/TA-A	Sales Force	4.0

### UPI (Unified Payments Interface)

Sh. Vijay Kumar Gupta gave a comprehensive overview of the UPI, which is a real-time payment system developed by the National Payments Corporation of India (NPCI). UPI was introduced to enable individuals and businesses to make payments electronically in a simple, secure, and efficient manner. UPI allows users to initiate transactions directly from their bank accounts using a mobile phone. Transactions can be carried out 24/7, including weekends and holidays, and are processed instantly, eliminating the need for lengthy waiting periods associated with traditional banking channels. One of the key features of UPI is its interoperability, which means users can send and receive money across different banks and payment service providers seamlessly. UPI supports a wide range of use cases, including peer-to-peer (P2P) transfers, merchant payments, bill payments, online shopping, and more. Users can pay utility bills, recharge mobile phones, book tickets, and even make donations to charities through UPI-enabled apps. UPI has been integrated into various mobile applications, including banking apps, e-commerce platforms, and digital wallets. This

integration allows users to access UPI services conveniently through the apps they already use, enhancing the adoption of digital payments. UPI transactions include encryption, two-factor authentication, and transaction limits set by banks to minimize the risk of fraud and misuse.

It is used on mobile devices to instantly transfer funds between two bank accounts. The mobile number of the device is required to be registered with the bank. The UPI ID of the recipient can be used to transfer money.



*Sh. Vijay Kumar Gupta giving the Technical Talk on UPI*

It runs as an open source application programming interface (API) on top of the Immediate Payment Service (IMPS) and is regulated by the Reserve Bank of India (RBI). Users can link multiple bank accounts to a single mobile application and perform transactions 24/7, including peer-to-peer transfers, bill payments, online shopping, and more.

## Search Engine Optimization

Smt. Vandana Sankhayan gave a presentation on Search Engine Optimization. Search Engine Optimization (SEO) is the strategic process of optimizing a website to increase its visibility and ranking on search engine results pages like Google, Yahoo, Bing etc. By optimizing various elements such as content, keywords, metadata, and backlinks, SEO aims to attract non-paid traffic to a website. It involves understanding search engine algorithms and user behavior to create a seamless experience for both search engines and users. Effective SEO can significantly enhance a website's online presence, credibility, and ultimately, its success in achieving business goals.

**On-Page Optimization** involves optimizing individual web pages to improve their relevance to specific keywords. On-page elements include title tags, meta descriptions, headers, URL structure, and content optimization with relevant keywords. **Off-Page Optimization** focuses on improving the website's authority and popularity by acquiring backlinks from other reputable websites. Quality backlinks signal to search engines that the website is credible and trustworthy. **Technical SEO** aspect deals with optimizing the technical elements of a website to improve its crawlability, indexability, and overall performance. Technical SEO includes aspects such as site speed optimization, mobile-friendliness, URL structure, and XML sitemaps.



*Smt. Vandana Sankhayan giving presentation on Search Engine Optimization*

Search engines prioritize websites that offer a positive user experience. UX optimization involves improving site navigation, reducing page load times, ensuring mobile responsiveness, and providing relevant and engaging content. Higher rankings in search engine results pages lead to increased visibility and traffic to the website. Websites that rank higher in search results are perceived as more credible and trustworthy by users. SEO optimization often leads to improved website usability and user experience, which can result in higher engagement and conversions.

## Blockchain

Sh. Bhupinder Pathak spoke about blockchain in his presentation. Blockchain is a method of recording information that makes it impossible or difficult for the system to be changed, hacked, or manipulated. A blockchain is a distributed, immutable, and decentralized ledger at its core that consists of a chain of blocks and each block contains a set of data. Blockchain uses peer to peer network.



*Sh. Bhupinder Pathak's, DIO Kangra presentation on Blockchain*

Instead of using a central entity to manage the chain, Blockchains use a distributed peer-peer network, and everyone is allowed to join. When someone enters this network, he will get the full copy of the blockchain. Each computer is called a node. All transactions recorded on a blockchain are visible to all participants in the network. This transparency enhances trust among users and enables greater accountability. Once a transaction is recorded on the blockchain, it cannot be altered or deleted. Each transaction is linked to the previous one, forming a chronological chain of blocks. This immutability ensures the integrity of the data stored on the blockchain. Blockchain utilizes cryptographic techniques to secure transactions and ensure the authenticity of participants. Transactions are verified and added to the blockchain through a consensus mechanism, such as proof of work or proof of stake, which prevents double-spending and fraud.

## Sales Force Technology

Sh. Jagdeep gave the presentation on Salesforce technology which is a leading cloud-based customer relationship management (CRM) platform that revolutionizes how businesses interact with their customers. It provides a comprehensive suite of tools for sales, marketing, customer service, and analytics, all accessible from anywhere via the internet.



*Sh. Jagdeep showing the demonstration of Sales Force Technology*

With its user-friendly interface and customizable features, Salesforce enables organizations to streamline their processes, improve efficiency, and enhance customer experiences. Its robust ecosystem also includes a vast marketplace of third-party apps and integrations, further extending its functionality.

Moreover, Salesforce leverages artificial intelligence (AI) through its Einstein platform to provide insights, predict outcomes, and automate tasks, empowering businesses to make data-driven decisions and drive growth.

Overall, Salesforce technology continues to redefine CRM, empowering businesses of all sizes to build stronger relationships with their customers and achieve greater success in today's competitive landscape.

## Quiz Competition on Mobile App

A quiz competition was also organized based on the technical presentations delivered by NIC Officials. A total of 36 officials participated in the quiz competition which was held on the Hindi Bodh Mobile App developed by NIC HP. 20 multiple-choice questions based on the technical content delivered by the officers were asked in the quiz competition.

**The result of the quiz competition was as follows:**

Position	Participant Name	Designation	Place of Posting
1 <sup>st</sup>	Sh. Mukesh Kumar	Scientist-D	NIC HP State Centre
2 <sup>nd</sup>	Kum. Ankita Mishra	Scientist-D	NIC HP State Centre
3 <sup>rd</sup>	Sh. Swetansh Shatak	Scientific/Technical Assistant-B	NIC Distt Centre Solan

The SIO also reviewed the recent updates to the Hindi Bodh mobile app, developed by the NICHHP which is currently being utilized for quiz competitions. Instructions were issued to leave an option blank when submitting feedback on Technical Talk Sessions within the mobile app. Additionally, it was desired to allow respondents to evaluate the quality of questions in their responses following the quiz.



*NIC HP officials attending the technical session*

As agreed that the following NIC officials will present a technical talk on the topic of their choice during the upcoming meeting scheduled for Saturday, 31-May-2024.

S.No.	Participant Name	Designation	Place of Posting
1.	Sh. Ajay Singh Chahal	SIO-Cum-Scientist-G	NIC HP State Centre
2.	Sh. Sandeep Sood	Scientist-F	NIC HP State Centre
3.	Sh. Vimal Kumar Sharma	Scientist-F	NIC HP State Centre
4.	Sh. Ashish Sharma	Scientist-D	NIC HP State Centre

The following officials were present in the technical talk on 04-05-2024:

NIC HP State Centre		
1	Sh. Ajay Singh Chahal	SIO-Cum-Scientist-G
2	Sh. Lalit Kapoor	Scientist-F
3	Sh. Sandeep Sood	Scientist-F
4	Sh. Sanjay Kumar	Scientist-F
5	Sh. Vijay Kumar Gupta	Scientist-F
6	Sh. Vimal Kumar Sharma	Scientist-F
7	Sh. Sandeep Kumar	Scientist-E
8	Sh. Daljeet Singh Rana	Scientist-E
9	Sh. Sanjay Thakur	Scientist-E
10	Sh. Ashish Sharma	Scientist-D
11	Sh. Mangal Singh	Scientist-D
12	Sh. Sarvjeet Kumar	Scientist-C
13	Smt. Vandana Sankhayan	Scientist-C
14	Sh. Mukesh Kumar	Scientist-D
15	Sh. Prithvi Raj	Scientist-C
16	Sh. Chunni Lal	Scientist-C
17	Smt. Monika	Scientist-B
18	Kum. Ankita Mishra	Scientist-B
19	Sh. Ramnarayan Yadav	Scientist-B
20	Sh. Jitender Sharma	Scientific Officer -SB
21	Smt. Pooja Mann	Scientific/Technical Assistant-A

22	Sh. Himanshu Gupta	Steno Grade-III
<b>District Centre Hamirpur</b>		
23	Sh. Vinod Kumar Garg	Scientist-F
24	Sh. Anurag Gupta	Scientist-E
<b>District Centre Kangra</b>		
25	Sh. Bhupinder Pathak	Scientist-F
26	Sh. Akshay Mehta	Scientist-E
<b>District Centre Kinnaur</b>		
27	Sh. Balwan Singh	Scientist-D
<b>District Centre Kullu</b>		
28	Sh. Brijender Kumar Dogra	Scientist-E
29	Sh. Sanjay Gupta	Scientist-E
<b>District Centre Lahual &amp; Spiti</b>		
30	Sh. Jagdeep	Scientific/Technical Assistant-A
<b>District Centre Mandi</b>		
31	Sh. Akhilesh Bharati	Scientist-E
32	Sh. Ashwani Kumar	Scientist-E
<b>District Centre Shimla</b>		
33	Sh. Pankaj Gupta	Scientist-F
34	Sh. Deepak Kumar	Scientist-C
<b>District Centre Sirmour</b>		
35	Sh. Mohan Rakesh Aggarwal	Scientist-D
<b>District Centre Solan</b>		
36	Sh. Sanjeev Kumar	Scientist-C
37	Sh. Swetansh Shatak	Scientific/Technical Assistant-B
<b>District Centre Una</b>		
38	Sh. Sanjeev Kumar	Scientist-E
39	Sh. Bhupinder Singh	Scientist-D