

Summer Internship Report on Online Application Testing

**NAtional Informatics centre**

**Tashiling Secretariate, G—017019epartment angtok-737101**

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Overall , the above team made our stay at **NIC** an enjoyable one and we are grateful to them for making it so.

- Ashis Ranjan Dey & Shaheen Fatima

# Introduction and Overview:



**Introduction**

National Informatics Centre (NIC) was established in 1976, and has since emerged as a "prime builder" of e-Government / e-Governance applications up to the grassroots level as well as a promoter of digital opportunities for sustainable development. NIC, through its ICT Network, "NICNET", has institutional linkages with all the Ministries /Departments of the Central Government, 36 State Governments/ Union Territories, and about 688 District administrations of India. NIC has been instrumental in steering e-Government/e-Governance applications in government ministries/departments at the Centre, States, Districts and Blocks, facilitating improvement in government services, wider transparency, promoting decentralized planning and management, resulting in better efficiency and accountability to the people of India.

During the last three decades, NIC has implemented many "network centric" application software for Programme implementation in various ministries and departments, using state-of-the-technology software tools. During 1980s and early part of 1990s, the policy thrust was on creating "Management Information System (MIS)" and "Decision Support System (DSS)" for development , planning and responsive administration in governments which led to the genesis of present day "e-Governance" / "e-Government". "Bridging the Digital Divide", "Social and Financial Inclusion through ICT" and "Reaching- the-Unreached" concepts were tried and made operational in the late nineties. NIC has vast expertise and experience in the design, development and operationalization of various e-Government projects in the areas of Public Administration and Governance like Agriculture & Food, Animal Husbandry, Fisheries, Forestry & Environment, Industry, Health, Education, Budget and Treasury, Fiscal Resources, Transport, Water Resources, Court Management, Rural Development, Land Records and Property registration, Culture & Tourism, Import & Exports facilitation, Social Welfare Services, Micro-level Planning, etc. With increasing awareness leading to demand and availability of ICT infrastructure with better capacities and programme framework, the governance space in the country witnessed a new round of projects and products, covering the entire spectrum of e-Governance including G2C, G2B, G2G, with emphasis on service delivery.

**NIC & e-Governance**

NIC has set up state-of-the-art ICT infrastructure consisting of National and state Data Centres to manage the information systems and websites of Central Ministries/Departments, Disaster Recovery Centres, Network Operations facility to manage heterogeneous networks spread across Bhawans, States and Districts, Certifying Authority, Video-Conferencing and capacity building across the country. National Knowledge Network (NKN) has been set up to connect institutions/organizations carrying out research and development, Higher Education and Governance with speed of the order of multi Gigabits per second. Further, State Government secretariats are connected to the Central Government by very high speed links on Optical Fibre Cable (OFC). Districts are connected to respective State capitals through leased lines.

Various initiatives like Government eProcurement System(GePNIC), Office Management Software (eOffice), Hospital Management System (eHospital), Government Financial Accounting Information System (eLekha), etc. have been taken up which are replicable in various Government organizations.

As NIC is supporting a majority of the mission mode e-Governance projects, the chapter on National e-Governance Projects lists the of details of these projects namely National Land Records Modernization Programme (NLRMP), Transport and National Registry, Treasury Computerisation, VAT, MG-NREGA, India-Portal, e-Courts, Postal Life Insurance, etc. NIC also lays framework and designs systems for online monitoring of almost all central government schemes like Integrated Watershed Management (IWMP), IAY, SGSY, NSAP, BRGF, Schedule Tribes and other Traditional Forest Dwellers Act etc.

## Need for e-governance

E-governance is a tool to provide efficient and effective governance. It increases the efficiency of governance by providing transparency and accountability and reducing the cost of governance.

Government

Government

Transactions

Citizens

e-Gov solution

## Issues in implementing e-governance

Various governments, involved in the task of building a e-governance solution, are facing a three pronged problem. The first is how to select and entrust a solution provider to deliver any part of e-governance. While there are numerous solution providers in the market, it appears unlikely that any single vendor can offer the entire system/solution.

The second is to ensure that after each solution provider has created a solution, the various solutions should be integrable and should talk to each other. Since each solution provider may use its own technologies, data schemas and standards, integration will be a challenge.

The third problem is to encourage the development of portable/ replicable solution, that can be reused in applications for other government agencies, States etc. The reasoning behind this is that, just as in businesses, around 85% of the processes are same across firms, within the same industry, it is expected that 85% of the processes should be similar across different governments.Thus, it should be possible to use the solutions developed for one government, in another government. Reusing the e-governance asset across different governments can substantially bring down the cost of governance.

## Solution Approach

One possible option for addressing the above stated challenges is to adopt a model in which the solutions to be developed and deployed can adopt to any network topology, make use of a reusable middleware ( which can impose some standardization). Such a middleware itself may make use of standard software components from the industry.Like Serviceplus developed by NIC. Finally the applications themselves will be built by Total Solution Providers on top of the middleware.



**NIC ACTIVITES**

"Informatics-led-development" programme of the government has been spearheaded by NIC to derive competitive advantage by implementing ICT applications in social & public administration. The following major activities are being undertaken:

* Setting up of ICT Infrastructure
* Implementation of National and State Level e-Governance Projects
* Products and Services
* Consultancy to the government departments
* Research and Development
* Capacity Building
* Technical support to Government departments.

**NIC SERVICES**

NIC is a Premier Information Technology Organisation in India providing State\_of\_Art Solutions for Information Management and Decision Support in Government and Corporate Sector. A number of Services are being provided by NIC to all the Government Ministries/Departments/States/Districts.

NIC is providing network backbone and e-Governance support to Central Government, State Governments, UT Administrations, Districts and other Government bodies. It offers a wide range of ICT services including Nationwide Communication Network for decentralised planning, improvement in Government services and wider transparency of national and local Governments.

Services:

* **[Anti Virus](http://www.nic.in/services/Anti%20Virus)**
* **[Business Intelligence](http://www.nic.in/services/Business%20Intelligence)**
* **[CollabCAD](http://www.nic.in/services/CollabCAD)**
* **[CollabDDS](http://www.nic.in/services/CollabDDS)**
* **[CollabLand](http://www.nic.in/services/CollabLand)**
* **[Domain Registration](http://www.nic.in/services/Domain%20Registration)**
* **[e-Governance Standards](http://www.nic.in/services/e-Governance%20Standards)**
* **[ICT Training](http://www.nic.in/services/ICT%20Training)**
* **[Integrated Network Operations](http://www.nic.in/services/Integrated%20Network%20Operations)**
* **[Messaging](http://www.nic.in/services/Messaging)**
* **[National Cloud at the Core of Digital India](http://www.nic.in/services/National%20Cloud%20at%20the%20Core%20of%20Digital%20India)**
* **[NIC Data Centres](http://www.nic.in/services/NIC%20Data%20Centres)**
* **[NKN (National Knowledge Network)](http://www.nic.in/services/NKN%20(National%20Knowledge%20Network))**
* **[Open Technology Group](http://www.nic.in/services/Open%20Technology%20Group)**
* **[Remote Sensing and GIS](http://www.nic.in/services/Remote%20Sensing%20and%20GIS)**
* **[SATCOM](http://www.nic.in/services/SATCOM)**
* **[Utility Mapping](http://www.nic.in/services/Utility%20Mapping)**
* **[Video Conferencing](http://www.nic.in/services/Video%20Conferencing)**
* **[Web Services](http://www.nic.in/services/Web%20Services)**
* **[Webcast](http://www.nic.in/services/Webcast)**

# Project – Overview: *eService Delivery Framework*

A major part of the project involved gaining a good understanding of The ServicePlus WebApp developed by NIC (National Informatics Centre).

Our task was to study its capabilities and scope in the eService system and to assist the various departments and government sectors in the creation, testing and other processes of an online service delivery.

During our work in the National Informatics Centre (NIC) we were able to complete the following tasks:

* Testing of the following online services:
  + Issue of Primitive Tribe Certificate.
  + Issue of Residential Certificate.
* Developing the user manual for the services stated above.
* Assisting the related officers to build the services and check the workflow of the services.

# Project – Terminologies: *eService Delivery Framework*

* **ServicePlus:** ServicePlus is a generic application to provide an electronic delivery for all the services provided by The Government to The citizen. The Government of India, State Governments and Local Governments are providing various services to benefit the citizens at Centre, State or Local level primarily Government to Citizen (G2C) and Government to Business (G2B). The services provided are either demand driven or mandated by the legislation. The services provided by Government can be categorized as:  
    
  **1.** **Regulatory Services:** Regulatory services are services like trade licence, permit for construction of a building etc that can be denied by the Government.   
  **2. Statutory Services:** Statutory services are services like Issuance of Birth/Death certificate which cannot be refused by Government.   
  **3. Developmental Services:** Developmental Services are services or schemes provided by Government for the benefit of citizens like NREGS, IAY, Old age Pension etc.

### The following are the salient features of the software -

1. Service(s) will be created online .  
   2. Citizens will be submitting applications online .  
   3. Service units will be able to receive application online .  
   4. Service units will be able to verify documents and application fee online .  
   5. Service units will be able to escalate application to some other person, in the case of absence of dealing authority, online .  
   6. Citizens will be monitoring Application status online .  
   7. Private Service Access Providers will be participating in the application receipt/submission and service delivery process online.

* The ServicePlus eService delivery system runs on the following framewok:
  + **Front- End:** Java.
  + **Database:** Postgress.
  + **Server:** Tomcat.
  + **Operating System:** Linux Redhat.

# Assessment of this Internship

This internship allowed us to put forward a lot of required qualities to work in a company, like team work, time management and self-taught. We are more than satisfied about this experience. It brought us a lot professionally but also personally.

In this last part we are gonna present you what we take out from this internship, in one hand technically and in another hand as human-being.

# A.Professional Assessment

First, from the standpoint of our developers skills we learned how to use new tools and languages, which is very useful for the continuation of our studies or our future career. PHP, for example, is an unavoidable language In the web development field, almost 75% of the website are built around this language, so it was really important to study it at some point. In addition, we had to learn it on our own, even if the languages are based on algorithmic principles, the self-taught side of our learning has brought us a lot and will be very useful in the IT field, given that it is constantly evolving and requires constant learning.

Having a project for a period of three months also changed our working habits, we have to think more about the organization of our working time, to be sure to comply with the imposed deadline.

In a way it was a preparation to the professional world, be able to revise upwards or downwards our goals based on the remaining time and adjust our working sessions depending on our progress in the project, allowed us to establish more effective working methods, which is essential during a teamwork.

# B.Personal Assessment

This internship brought us a lot professionally, but not only. Indeed, we got very positive personal results too. We visited many traditional places in Gangtok. The landscapes are mostly really beautiful, so we will leave with lots of unforgettable memories.

# Conclusion

During this internship, we have increased our knowledge in web development and online application testing. We realized that mastering tools is very important and crucial for the project development. Our internship was a really nice and rewarding experience of life. We spent a great time and enjoyed NIC and its surroundings a lot. We would like to thank all the people we met there and we will never forget these days.