

About Institute

Guru Nanak Dev Engineering College (GNDEC), Ludhiana, established in 1956, is one of the oldest and a premier Engineering Institute of India. The Institute is set up on 88 acres of sprawling pristine land along Gill Road (Ludhiana-Malerkotla Highway). The foundation stone of the college was laid by Honourable Dr. Rajendra Prasad Ji, President of India on April 8, 1956. GNDEC is now an autonomous college under UGC Act 1956 [2(f) and 12(B)] and also accredited by NAAC with 'A' grade. The Institution has six Under-Graduate (UG) programmes, thirteen Post-Graduate (PG) programmes, besides being a QIP centre for Ph.D.

About Department

Computer Science and Engineering Department was established in 1997. Department is currently offering undergraduate and postgraduate programmes with an intake of 300 and 12 respectively. Ph.D. programme is also being offered in the department. The department has various laboratories equipped with state-of-the-art computing facilities to support the research and teaching activities. The research activities in the department involve fields like Natural Language Processing, Image Processing, Big Data, Cloud Computing, Software Engineering, Network Security, etc.

Objective

The Semantic Web is an extension of the World Wide Web where information is given meaning, enabling computers and people to work in cooperation. It aims to structure data on the web in a way that makes it easily understandable by machines, facilitating tasks like automated data integration, knowledge discovery, and more efficient information retrieval. Key technologies include RDF (Resource Description Framework) for representing data, OWL (Web Ontology Language) for defining ontologies, and SPARQL for querying and manipulating data. The ultimate goal is to create a web of interconnected data that can be interpreted and utilized by intelligent systems.

Who can apply?

The students of B.Tech. – 2nd year, 3rd Year (CSE/IT), BCA and MCA can apply for this training programme. Students from other Engineering / Polytechnic colleges can also join this training.

Four Weeks Summer Training Program

On

Mastering the Semantic Web

(10th June, 2024 – 05th July, 2024)



Dr. Kiran Jyoti
(Head, Department of CSE)

Prof. Jaswant Singh Taur
(Training Coordinator)

Organized by:

Testing and Consultancy Cell

in collaboration with

Department of Computer Science and Engineering
Guru Nanak Dev Engineering College, Ludhiana, Punjab – 141006

[An Autonomous College u/s 2(f) and 12(B) of UGC Act. 1956]

Mastering the Semantic Web

Duration: 4 Weeks

Mode: Offline

Contents to be covered

Week 1: Introduction to Semantic Web & RDF Basics Topics

Introduction to Semantic Web & RDF Basics Topics: Overview of the Semantic Web, Basics of RDF syntax and semantics, Triple stores and RDF databases NFR Focus: Frontend Usability and Accessibility - Introduction to user-centered design principles for semantic web interfaces, ensuring accessibility standards compliance in frontend development

Week 2: RDF Schema & OWL Overview Topics

Introduction to RDF Schema, OWL (Web Ontology Language) overview, Description Logic (DL) semantics NFR Focus: Frontend Performance - Strategies for optimizing RDF data retrieval and storage for frontend interactions, enhancing frontend responsiveness

Week 3: SPARQL & Linked Data Principles Topics

Introduction to SPARQL, Basic queries and querying RDF datasets, Linked Data principles and best practices NFR Focus: Frontend Usability and Accessibility - Implementing user-friendly linked data interfaces, ensuring accessibility standards compliance in frontend SPARQL queries

Week 4: Semantic Web Applications & Ontology Engineering Topics

Semantic search engines, Semantic annotation, and metadata, Ontology development methodologies NFR Focus: Frontend Performance and Scalability - Optimizing performance and scalability in semantic web applications, integrating frontend-friendly ontology development methodologies

- Daily Quiz
- Hands on Practice on daily tasks
- Weekly Assignment – with Practical Problems
- **Project Submission – Within One Weeks after completion of the course.**

Registration Form

Name (in block letters): _____

University Roll Number: _____

College Roll Number: _____

Department: _____

Institution: _____

Mailing Address: _____

Age: _____ Gender (M/F): _____

Mobile No.: _____

Email: _____

Registration Fee: Rs. 4500/- (Including GST)

Receipt No. (Cash Payment): _____ Date: _____

Signature of Applicant: _____

Note:

The participants should send through e-mail the scanned copy of the filled and duly signed registration form to the training coordinator on or before **7th June, 2024**. The hard copy of the registration form must be submitted on the first day of the program at the registration desk.

Contact Detail:

Prof. Jaswant Singh Taur (Resource Person)

+91 96468-63063, jaswant@gndec.ac.in