WikiForAll program - The First series

A short 3-month module to learn and contribute to Wikimedia Technical ecosystem:

- Each month there will be two days (16 hours/month) of workshop and training events planned based on the mentor and students' availability.
- Post every training there will be a follow up on the tasks which will help the students to contribute to the project and learn about the technology in a better way.
- Every month we shall do these training sessions on weekends preferably as some of the students are also employed in part time works.

Month One:

- Introduction to Wikipedia, Wikimedia movement and various projects
    - Beginning of Wikipedia, and Wikimedia movement
    - The sister projects of Wikipedia
- Getting to know: The technical spaces in Wikimedia ecosystem
    - The technical ecosystem of Wikimedia
    - Understanding the stack
    - Areas of contribution to the technical Wikimedia ecosystem
- Introduction to MediaWiki software and Version control
    - MediaWiki core, extensions, and skins
    - Setting up SUL account and local development environment
    - Version control
- Getting started: Scripts and Gadgets - 1
    - Understanding testwiki, userscripts and its importance
    - Writing userscripts
- Getting started: Scripts and Gadgets - 2
    - Introducing gadgets, most used gadgets in Wikimedia ecosystem
    - Improving/Bug fixes for the existing gadgets
- Working with extension - 1
    - Understanding extensions in Wikimedia ecosystem
    - Installing, upgrading and uninstalling an extension in your local development environment

- Working with extension - 2
    - Improving existing extensions

Month Two:

- Working with Data, Wikimedia APIs and bots - 1
    - Introduction to MediaWiki Database, Wikimedia query service (Quarry), fetching data using API
- Working with Data, Wikimedia APIs and bots - 2
    - Introduction to Pywikibot, installing and configuring
    - Contributing to Pywikibot, improving through bugfixes

Month Three:

Mini Hackathon/Internship work

Research development and report submission*

Research activities to include:

- **Identify challenges of learning in Open Source projects and how Wikimedia projects can bridge the Academia gap.**
- **Observe how the proposed curriculum can fit the student's skills required to develop for making them eligible for employment.**
- **Host focused group discussions and interviews for supporting the observation.**
- **Publish a research report with recommendations on how the first series of the WikiForAll program has worked for the targeted student community and how this can be expanded in future.**

Detailed modules included in this program-

Module 1: Introduction to Web Design and Development

- **Understanding the Web:**
    - Basics of the internet
    - Client-server architecture
    - Domain names and hosting
- **Web Design Fundamentals:**
    - Basics of UI/UX design
    - Responsive design principles

- **HTML and CSS Basics:**
    - HTML structure and semantics
    - CSS for styling elements
    - CSS selectors and properties
    - Box model and layout techniques
    - Introduction to CSS frameworks (Bootstrap, Tailwind CSS)

Module 2: Python for Web Development

- **Introduction to Python:**
    - Python installation and setup
    - Basic syntax and data types
    - Variables, operators, and control flow
    - Functions and modules
- **Web Development with Python:**
    - Flask framework:
        - Routing and request handling
        - Templates and rendering
        - Session management and security
    - Django framework: (This is Advanced)
        - Model-View-Controller (MVC) architecture
        - Database integration (ORM)
        - Templating and form handling
        - URL routing and views
    - Web scraping with Beautiful Soup and Scrapy

Module 3: Advanced Web Development Topics

- **JavaScript Fundamentals:**
    - Introduction to JavaScript
    - DOM manipulation
    - Event handling
    - Asynchronous programming (AJAX)
- **Front-End Frameworks: (This is advanced)**
    - React:
        - Components and JSX
        - State and props

        - Routing and data fetching
    - Angular:
        - Components, modules, and services
        - Data binding and templates
        - Routing and forms

Module 4: Project-Based Learning

- **Creating a Simple Website:**
    - HTML, CSS, and JavaScript for static website
    - Responsive design implementation
- **Building a Dynamic Website with Python:**
    - Flask web application
    - Database integration
    - User authentication and authorization
    - Deployment to a web server

Learn Mediawiki

Module 1: Introduction to MediaWiki

- **What is MediaWiki?**
    - A brief history and overview
    - Core concepts and terminology
    - MediaWiki as a content management system (CMS)
- **Basic Editing:**
    - Creating and editing pages
    - Formatting text and images
    - Using basic markup (headings, lists, links, etc.)
    - Understanding the visual editor
- **MediaWiki Interface:**
    - Navigating the wiki interface
    - Using the search function
    - Understanding the sidebar and toolbar

Module 2: MediaWiki Administration Basics

- **User Management:**
    - Creating and managing user accounts
    - Assigning user groups and permissions
    - User preferences and settings
- **Page Management:**
    - Page protection and restrictions
    - Page history and version control
    - Deleting and restoring pages
- **MediaWiki Configuration: (This is advanced)**
    - Understanding the LocalSettings.php file
    - Basic configuration options (language, skins, extensions)
    - Customizing the wiki's appearance and behavior

Module 3: MediaWiki Extensions

- **Understanding MediaWiki Extensions:**
    - What are extensions?
    - How to install and enable extensions
    - Common extensions and their functionalities (e.g., Semantic MediaWiki, VisualEditor, Cite)
- **Customizing MediaWiki:**
    - Creating custom templates and skins
    - Writing simple Lua scripts for automation
    - Using hooks to modify MediaWiki's behavior

Module 4: MediaWiki API

- **Introduction to the MediaWiki API:**
    - What is an API?
    - How the MediaWiki API works
    - Basic API concepts (actions, modules, parameters)
- **Making API Requests:**
    - Using tools like curl, Postman, or Python's requests library
    - Understanding API response formats (JSON, XML)
    - Parsing API responses
- **Common API Actions:**
    - Querying for page information

    - Editing pages programmatically
    - Retrieving recent changes
    - Searching the wiki
- **Building Bots and Scripts with the API:**
    - Automating tasks (e.g., data entry, categorization)
    - Creating bots to interact with the wiki
    - Using the API for data analysis and visualization