CSE209 – Programming in Python

Practical 1

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| **1.1 Date:** |
| **Aim:** To develop environment configuration skills by setting up Python, Anaconda, and virtual environments for efficient project dependency management. |
| **Code:**  **Installation**   * Install Python and verify its installation using the command prompt or terminal.      * Install Anaconda and validate it using the command prompt or terminal.     **Configuration**   * Set up environment variables (if required) to access Python and Conda from the command line.      * Verify the versions of Python and Anaconda installed on the system.     **Virtual Environment**   * Create a new virtual environment using both Conda and venv methods. * Activate and deactivate the created virtual environment. * Install a specific package (like NumPy) in the virtual environment and verify its installation. * List installed packages in the virtual environment.   **FOR CONDA:** |

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| **Aim: Activate and deactivate the created virtual environment.**    **Aim: Install a specific package (like NumPy) in the virtual environment and verify its installation.** |

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| **Conclusion/Summary:**  Conclusion:  Setting up and configuring your Python and Anaconda environments, as well as effectively managing virtual environments, is a fundamental skill for efficient project dependency management. By completing the outlined steps, you ensure that you can work with different projects simultaneously without conflicts and maintain a clean and organized development environment.  Summary of the Process:   1. Installation: Installing Python and Anaconda and validating their installation ensures that you have the necessary tools for development. 2. Configuration: Setting up environment variables and verifying the versions of Python and Anaconda allows for smooth access and operation from the command line. 3. Virtual Environment: Creating, activating, and deactivating virtual environments using Conda and venv, along with managing packages within these environments, provides an isolated space for each project. 4. Project Isolation: Understanding the need for project isolation and the role of virtual environments in achieving this helps prevent dependency conflicts and ensures that each project can run with its specific requirements.   By mastering these skills, you enhance your ability to manage dependencies effectively, avoid conflicts between projects, and create a more efficient workflow. This not only boosts productivity but also contributes to better project organization and reliability. Keep practicing and refining these techniques to become proficient in environment configuration and management. | | |
| **MITUL : 4-1-2024**  **Student Signature & Date** | **Marks:** | **Evaluator Signature & Date** |