**CERTIFICATE OF COMPLETIOn**



***This is to certify that***

***Mwangi John Gathirua***

***has successfully completed the***

***Python Development Course***

***offered by Udemy***

***Course Details:***

***Course Title: Python Development Course  
Course Duration: 14/08/2024 to 04/09/2024  
Total Hours: 400hrs  
Course Format: Online***

***Course Overview:The Python Development Course provided an in-depth exploration of Python programming, equipping participants with the essential skills and knowledge required to excel in software development. The curriculum covered a broad range of topics, including but not limited to:***

* ***Introduction to Python: Basic syntax, data types, and control structures.***
* ***Data Structures and Algorithms: Lists, dictionaries, sets, tuples, and algorithmic problem-solving.***
* ***Object-Oriented Programming (OOP): Classes, objects, inheritance, and encapsulation.***
* ***Web Development: Introduction to web frameworks such as Flask and Django.***
* ***Database Management: SQL and integration with Python through libraries such as SQLAlchemy.***
* ***Testing and Debugging: Techniques for writing unit tests and debugging Python code.***
* ***Advanced Topics: Asynchronous programming, file handling, and working with APIs.***

***Learning Outcomes:***

***Upon successful completion of the course, participants have demonstrated the ability to:***

* ***Write efficient, clean, and maintainable Python code.***
* ***Implement and utilize Python libraries and frameworks for various development needs.***
* ***Design and develop web applications and integrate them with databases.***
* ***Apply debugging and testing techniques to ensure the quality and reliability of code.***
* **Solve complex problems using advanced Python programming techniques.**

**Evaluation:**

**Participants were evaluated through a combination of practical assignments, projects, and examinations. The successful completion of all assignments and the final project is indicative of the participant’s competence in Python development.**

**Certification:**

**This certificate is awarded in recognition of the participant’s commitment, perseverance, and successful accomplishment in mastering Python development. The skills and knowledge acquired during the course are expected to contribute significantly to their professional growth and technical expertise.**

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**Instructor’s Signature  
Corey MSChauffer  
Python web development  
Udemy & W3school**

****Date of Issuance: 09/12/2024**

***Acknowledgment:***

***By receiving this certificate, the participant acknowledges their dedication to learning and their readiness to apply their skills in real-world scenarios.***

***Congratulations on your achievement!***

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***Certificate Number: cert4089***