**NIRMA UNIVERSITY**

**School of Technology, Institute of Technology**

**B. Tech. Computer Science and Engineering**

**Semester-VII**

**Department Elective-IV**

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| **Course Code** | 2CSDE77 |
| **Course Title** | Microservice Architecture and Programming |

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| **List of Practicals** | | |
| **Sr** | **Title** | **Hrs** |
| 1 | Experimenting with Docker Containers and Git - understanding its fundamentals with basic operations on it | 4 |
| 2 | Ballerina – Hands-on with cloud native language concepts | 4 |
| 3 | Designing gRPC based micro-service with Ballerina | 4 |
| 4 | Message queuing system based Micro-service application | 6 |
| 5 | Designing Distributed transaction based Micro-service application | 4 |
| 6 | Developing complex Micro-services with integration of API Gateway | 4 |
| 7 | Scalable and Resilient Micro-service design with security provisions for the service | 4 |

<https://www.youtube.com/watch?v=7BERknbDWVc> - How would you describe Cloud-native App Dev?

<https://www.youtube.com/watch?v=9Ik96SBaIvs> -

<https://www.youtube.com/watch?v=NoFu_rpM7EQ> - What is Cloud Native? | Cloud Native Vs Traditional Application - What is the difference?

Cloud-native development is just that—an approach to building and updating apps quickly, while improving quality and reducing risk. More specifically, it’s a way to build and run responsive, scalable, and fault-tolerant apps anywhere—be it in public, private, or hybrid clouds.

Quickly code, build, deploy, and manage without compromising security or quality.