1. Application development
2. Infrastructure and system development
3. Computing platforms and technologies

1. Application development

Applications that leverage cloud computing benefit.

Web applications are one class of it:

- Applications performance influenced by the workload generated by the different users demand.
- With the diffusion of Web 2.0 technologies, the Web has become a platform for developing rich and complex applications.
- It includes enterprise applications that now leverage the Internet as the preferred channel for service delivery and user interaction.

Resource-intensive applications are another class of it:

- These can be either dataintensive or compute-intensive applications.
- For example, scientific applications.
- Resource-intensive applications are not interactive and they are mostly characterized by batch processing.

Cloud computing provides application services that mimic the behavior of desktop applications but that are completely hosted and managed on the providers side.

Developers access such services via simple Web interfaces, often implemented through

RREST (Representational State Transfer) Web services.

2. Infrastructure and system development

- IaaS solutions provide the capabilities to add and remove resources.
- PaaS solutions embed into their core offering algorithms and rules that control the provisioning process and the lease of resources.
- Integration between cloud resources and existing system deployment is another element of concern.
- Web 2.0 technologies constitute the interface through which cloud computing services are delivered, managed, and provisioned.
- Virtualization technology is a core feature of the infrastructure used by cloud providers.

3. Computing platforms and technologies

Development of a cloud computing application happens by leveraging platforms and frameworks that provide different types of services, from the bare-metal infrastructure to customizable applications serving specific purposes.

Some of the cloud computing platforms and technologies are:

- Amazon web services (AWS): Provides customers with a wide array of cloud services.
- Google AppEngine: For developing and hosting web applications in Google-managed data centers.
- Microsoft Azure: It provides a range of cloud services, including those for compute, analytics, storage and networking.
- Hadoop: Hadoop is a Java-based framework used to manipulate data in the cloud or on

premises. Hadoop can be installed on cloud servers to manage Big data whereas cloud alone cannot manage data without Hadoop in It.

- Salesforce.com: It is a cloud computing SaaS company that specializes in customer relationship management (CRM). Salesforce’s services allow businesses to use cloud technology to better connect with customers, partners and potential customers.
- Manjrasoft Aneka: It is focused on the creation of innovative software technologies for simplifying the development and deployment of applications on private or public Clouds.