Cloud Computing and Communication (ITEC313)

Charles Fomevor
Central University

Course Outline:

- Cloud Computing and Communication (ITEC313)
- Detailed course outline (provided)

Course Outline continued:

- Cloud Computing and Communication (ITEC313)
  - Lecturer’s information and contact
  - Course objective for ITEC313
  - Course Description
  - Learning outcomes
  - Instructional Methods
  - Course Materials and Readings
  - Evaluation

Course Outline continued:

- Cloud Computing and Communication (ITEC313)
  - Commit to Academic Integrity
  - Consequence of Academic Dishonesty
  - Missed Exams/ Tests/ Assignments
  - Week by week course schedule/ Organizer
    - Topics, Activities, Due Dates
    - Further inputs

Overview (Distinct Technologies)

Advanced computer architectures

- **Parallel computing** means running several computers, which may be kept in one room, but they are made to solve one problem only.

Such architectures are called **advanced computer architectures** while the computers are known as parallel computers or supercomputers. These computers are parallel programming constructs; examples are CRAY-XMP, CRAY-Y-MP, PARAGON, PARAM, and JUGENE.

Cloud Computing

- Cloud computing refers to the use of resources available on the internet via a time- and cost-effective method made possible due to the sharing of the resources.
- This implies that the cloud provides software as a service, infrastructure as a service, and platform as a service. (more on that soon)

Grid Computing

- A cluster of computers that are geographically distributed but work together to perform a common tasks.
- **Grid computing** uses grid-controlling software that divides the work into smaller pieces and assigns each piece to a pool of thousands of computers. Later on, the controlling unit (CU) assembles the results to build the output. The Search for Extraterrestrial Intelligence (SETI) is a grid computing system. People all over the world share idle CPU cycles of their computers with the SETI project.

Autonomic Computing

- IBM introduced the concept of **autonomic systems** with the following features:
- 1. Self-Awareness
- 2. Self-Configuring
- 3. Self-Optimizing
- 4. Self-Healing
- 5. Self-protecting
- 6. Open Systems

Group Activity

- Follow guided instructions