Applications in Distributed Databases

Module Information

2022.01, Approved

Summary Information

Module Code	7125COMP
Formal Module Title	Applications in Distributed Databases
Owning School	Computer Science and Mathematics
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	33

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	The aim of the module is to provide students with hands-on experience of setting up, populating and querying large scale distributed databases using de-facto industry standard tools.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Formulate, design and construct robust example distributed databases.
MLO2	2	Formulate effective query mechanisms for distributed databases using de facto industry standard tools.
MLO3	3	Critically evaluate the effectiveness of the solutions developed.

Module Content

Outline Syllabus	Distributed databases, tools and approachesReview MapReduce and HadoopCluster setup tools e.g. AmbariPopulating distributed databasesRe-configuring SQL database data for distributed datasets e.g. SqoopHadoop Distributed File system (HDFS)Fault tolerance in distributed file systemsGoogle's Bigtable, HBase and GUI Clients e.g. HareDBData extraction tools e.g. HiveDistributed database application development e.g. PigLarge cluster management tools e.g. ZookeeperEmerging trends in applications of large scale databases
Module Overview	
Additional Information	This module provides both theoretical and practical experience of large scale data storage considerations and the use of tools to support the processing of that data.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Essay	Database setup and population	40	0	MLO1
Centralised Exam	Database application develope	60	0	MLO2, MLO3

Module Contacts