Innovations in Software

Module Information

2022.01, Approved

Summary Information

Module Code	7117COMP
Formal Module Title	Innovations in Software
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	12
Practical	12
Seminar	12

Module Offering(s)

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

Aims and Outcomes

Aims	To investigate the role and operation of data warehouses in the field of business intelligence and to apply the process of Extract, Transform & Loading (ETL) in constructing data warehouses.To examine the variations in platform capability when developing mobile applications that aim to replace or augment normal applications and to relate those considerations to the development process.To utilize the principles of Object Orientation (OO) and the capabilities of modern Application Programming Interfaces (API) in the development of Rich Internet Applications (RIA) that strives to make software web based and thusly available as a service.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Explain in detail the operation of advanced data warehouses in support of business intelligence.
MLO2	2	Specify and develop mobile applications for typical platforms.
MLO3	3	Appreciate the functional variations between normal and compact APIs.
MLO4	4	Specify and develop RIAs across clients and servers.
MLO5	5	Employ OO design and programming when producing applications for typical APIs.

Module Content

Outline Syllabus	Business Intelligence and the Analytical Database.Extract Transform & Loading.Multi-Dimensional Modelling.Star & Snow Flake Schemas.Aggregations.Analytical Extensions to SQL's SELECT Statement.Restrictions of compact APIs and Smart Device specific API capabilities.Web Based Applications versus Mobile Applications.RIA History & Overview.Interface Design - using Scripting or Designers.Media Integration.Object Oriented Design & Programming review.Client Side Scripting.Data Communication through Web Services.
Module Overview	
Additional Information	This module allows the students to explore and gain competence within numerous areas of modern software development. The focus of development is contemporary in that each area explored, is an important field of software development that is key to the growth of Information Technology in the world today.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Portfolio	ETL process investigation	30	0	MLO1
Technology	Mobile and RIA Dev	70	0	MLO2, MLO3, MLO4, MLO5

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Glyn Hughes	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings