

Module: Mobile Databases 361

Module name:	Mobile Databases 361
Code:	MDB361
NQF level:	6
Type:	Speciality – Diploma in Information Technology (Mobile Development)
Contact Time:	48 hours
Structured time:	8 hours
Self-directed time:	24 hours
Notional hours:	80 hours
Credits:	8
Prerequisites:	PRG262

Purpose

This module serves as an introduction to mobile database design and development. Database creation and organization of unstructured data will be addresses including data security. The emphasis will be on using database management systems to build and maintain relational databases. The student will create databases, queries, custom forms, and reports.

Outcomes

Upon successful completion of this module, the student will be able to demonstrate:

- An informed understanding of the core areas of database design and implementation, and an informed understanding of the key terms, concepts, general principles, rules, and theories thereof as it relates to unstructured data.
- The ability to select and apply standard methods, procedures, or techniques regarding data manipulation, and to plan and manage an implementation process within a well-defined, familiar, and supported database environment.
- The ability to identify, evaluate and solve defined, routine, and new problems within a familiar context, and to apply solutions based on relevant evidence and procedures or other forms of explanation appropriate to the implementation of unstructured data objects, demonstrating an understanding of the consequences.
- The ability to gather information from a range of sources, including oral, written, with regard to user requirements, to select information appropriate to the development of a database in a mobile environment.
- The ability to operate in a range of familiar and new contexts, demonstrating an understanding of unstructured database systems, their constituent parts, and the relationships between these parts, and to understand how actions in one area impact on other areas within the same system.

Assessment

- Continuous evaluation of theoretical work through written assignments, a formative test, and a summative test.
- Continuous evaluation of project work.
- Final assessment through a written examination.

Teaching and Learning

Learning materials

Prescribed books (EBSCO)

 **Dasadia C, Nayak A. MongoDB Cookbook - Second Edition. Vol Second edition. Packt Publishing; 2016.**

Learning activities

The teaching approach is a combination of the presentation of theoretical concepts, exercises, and discussions. It a collaborative model with a practical approach, with one mandatory assignment and one project, which must be completed during the module.

Notional learning hours

Contact	Distance	Other	Type of learning activities	% Learning
y	y	n	Lectures (face-to-face, limited interaction or technologically mediated)	40%
y	y	n	Tutorials: individual groups	20%
n	y	n	Syndicate groups	10%
n	y	n	Independent self-study of standard texts and references (study guides, books, journal articles)	10%
n	y	n	Independent self-study of specially prepared materials (case studies, multi-media, etc.	20%

Syllabus

- Database Design
- Implementation of unstructured data
- Data manipulation
- Data management
- Basic database functionality
- Giving structure to unstructured data