Faculty of Arts, Science and Technology

CSY3024 (Databases 3)

Level 6

Assignment 1

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Assignment 1

Weighting: **50%**
Submission deadline: **19th May 2024 (by 23:59)**

Learning Outcomes Assessed:
LO1 Learning to learn: recognise their own major areas of weakness and accept the need for further work in those areas.
LO2 Design, build, and test a simplified database applications, corresponding to a particular specification.
LO3 Communication skills: outline the function and intercommunication between the various hardware/software components of a deployed application.

Introduction

This assignment is compulsory as it is a major part of the formal assessment. **Read this document carefully and make sure that you are clear about what you have to do, and what you have to hand in, before you attempt the assignment.**

You could demonstrate your work to the module tutor during practical sessions for formative feedback prior to the submission date.

Assignment work

This assignment has two main parts as below:

I. **Portfolio (30%)** – Personal portfolio including learning activities and self-reflection.

- Learning activities include some research work and the practical activities, which are given weekly.
- The reflection should be your thoughts/understanding of the topics. Note: it should be in OWN words (1st person) and not copy of lecture notes or information from other sources.
- It's students' responsibility to keep their portfolio safe. Cloud storage (e.g., Dropbox or Google Drive) is recommended.
- There will be a separate link on NILE for the submission of student portfolios by the assignment deadline.

II. **Part 2 (50%)** - development of a graph database for a given dataset (EPS_matches.csv), which can be found in the 'Assignment' section on NILE. The dataset contains information about the English Premier League (EPL) matches. Students are expected to analyse the given dataset, design an appropriate graph model, create a graph database to store information in the dataset and to perform the following queries using Cypher Query Language:

1) Display the total number of matches played.

2) Display details of all matches involved “Chelsea FC”.
3) Display all the teams that played the EPL matches in the season.
4) Display the team with the most “draw” in Jan.
5) Display the team that has the best scoring power.
6) Display the team that has worst defending.
7) Display top five teams that have best away winning records.
8) Display top five teams with best half time result.
9) Which teams had the most “draw”?
10) display the team with most consecutive “loss”.

What should be submitted

TWO separate documents (in the format of MS word or PDF) for both parts needs to be submitted on NILE.

1. **Portfolio (30%)**

The portfolio should be organised by weekly sections – weekly learning activities and self-reflection should be clearly indicated in the document.

2. **Assignment report (70%)**

Students need to clearly document the process of analysis of dataset, design of the graph model, creation of database and answers of the queries. Cypher codes needs to be included in the report as text and explained in detail. The query results are to be included as screenshots in the report.

A short assignment demo video

Students are required to provide a 5-minute (± 2 minutes) video demo, which is COMPULSORY and should at least include the following: the design and justification of the graph model and explanation of database creation and query solutions. Due to the timing, students don’t have to talk through all queries, just pick a few that are worth highlighting. **Failure in submission of the video demo will automatically result in a ‘Fail’.** The demo videos need to be uploaded to *video.northampton.ac.uk*; please use the default ‘**Unlisted**’ setting so that the uploaded video can be viewed by the marker. The link to the demo video must be on the front page of the assignment report.

Marking criteria

Grade /Item (weighting)	PART 1		PART 2		Report Quality (20%)	D (
	Learning activities (20%)	Reflection (10%)	Solutions (30%)	Quality of Solutions (10%)		
No submission	No submission of lab exercises and diary entries.	No reflection summary	Nothing submitted or substantially plagiarised.	No documentation of process.	Non submission	Non submissior
Fail	Significant lack of evidence of engagement - very few exercises have been attempted and/or very few entries in the diary.	Very poor quality of reflection; limited amount of writing.	Very little codes have been developed; none/very few of the queries have been attempted.	Poor quality of solution codes, difficult to read and understand.	The report is poorly written in terms of structure and quality of writing and readability.	Video demo is a poor quality in video and audi
Pass	Most of the exercises have not been attempted and there are sufficient amount of reflection in the portfolio.	There are sufficient amount of reflection about learning activities throughout all the exercises.	Good amount of effort in creating the graph database for given dataset; a minimal number of queries have been attempted, some of which work corrected.	Code designs generally follow key concepts from lectures and lab exercises, but may contain major issues.	Report contains a basic structure but no or very limited amounts of content have been added. No evidence of reflective comments. Very limited number of sources in the bibliography.	Video demo is a of length, video
Good	All exercises have been completed and there are good evidences of reflection in the portfolio.	Good reflection about the learning activities throughout the exercises.	A good graph database has been created, there are some minor issues; and most of the queries have been answered correctly.	Code designs generally follow key concepts from lectures and lab exercises, there are a few minor issues.	Report is descriptive. An attempt at documenting some of the required process has been made and is accurate. Some evidence of reflective comments. Bibliography is in Harvard style.	Good video der length, video ar good understar matters and exp work.
Excellent	All the exercises have been completed and there are quality reflection on the learning activities.	High quality reflection about the learning activities has been written.	The database creation is almost perfect, most of the queries have been answered correctly.	Code designs closely follow key concepts from lectures and lab exercises; there is no issue observed.	Report is very well written in terms of structure, writing quality and readability. Evidence of reflective comments and additional reading by a relevant Harvard style references.	Excellent video length, video ar the way of conc explanation of a of high quality.
Outstanding	All the exercises have been completed and there are evidence of extra attempts/tests of commands for extending understanding of subject knowledge and further development of skills.	Exceptionally good reflection on the learning activities throughout the learning process; the writing is concise and well structured.	An outstanding design of the graph database based on the given dataset; all the queries have been answered correctly.	Exceptional quality of database design and query solutions.	An excellent report that shows extensive reflection on the work conducted with substantial evidence of additional reading and critical thinking of subject matters. Where appropriate , arguments are well supported by Harvard style references.	An outstanding aspects.