National College of Ireland

MSCDAD_A_JAN25I
MSCDAD_B_JAN25I
MSCDAD_C_JAN25I
PGDDA_JAN25
Release: Week of 26th of May
Submission: Week of 28th of July

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Business Intelligence & Business Analytics

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Continuous Assessment (CA) Type: Project

Weight: 80% of Module Grade

Instructions: Students Can work in Groups – Max Group Size is 3 people.

SUBMISSION DETAILS:
Submissions will be made through Turnitin on Moodle
Deadline: 3rd of August 2025
All Submissions must be made using Microsoft Word, PDFs will not be accepted

Late Submissions: Late submissions will be subject to a late submission penalty except where a student has applied and been approved for an extension through NCI360.

TURNITIN: All report submissions will be electronically screened for evidence of academic misconduct (i.e., plagiarism and collusion)
The Use of AI generated content will not be entertained, all response must come from the student's own mind and must be original. AI will not be accepted and disciplinary action will be taken.

Project Outline

Project Scenario:

You are currently working for a professional services company of your choosing e.g Accenture, Deloitte, SAP, Salesforce etc. As part of your role as a Business Intelligence and Business Analytics specialist you and your team* have been embedded with a business, company and/or client which is either:

A Company which is experiencing severe issues and without action will cease operations

"A company which is in a time of financial and operational trouble and require your BI and BA skillsets to help identify issues with the business, both operational and technological and support the implementation of Tools and Methodologies and support the re-opening or re-establishment of the existing business "

OR

A Company with an Expansion plan but facing issues

"A Company which is in a time of change, they have seen recent successes as a small enterprise and are looking for your BI and BA skills to support the transformation of the company from a small enterprise to a medium to large enterprise. The company ultimately will be experiencing issues and are lacking in a technological infrastructure to support the business transformation"

It is advised that students focus on a company which is experiencing severe issues, rather than option 2 which is the company with an expansion plan.

Students are expected to implement Both a Dashboard Infrastructure and a CRM implementation.

The choice of which software are to be implemented are given to the students:

For Dashboard Infrastructure: Tableau OR Power BI

For CRM Implementation: Salesforce OR HubSpot

Only the above-mentioned toolsets are allowed, no alternatives will be considered.

Assume you are a consultant hired by an organisation. You will help the organisation to analyse where they stand and where they want their business to be. For the sake of business's success, your BI and BA solution must be feasible and good enough to address their goals.

The project must use any of the platforms and tools described earlier. Make abundantly clear your understanding of problem-solving steps through BI & BA concepts. Justify your design and implementation decisions, as well as any assumptions taken.

1. Prepare a project specification report (40%), with headings seen below in bold:

   (a) **Background information** and **business goals** of the organisation. The marketplace in which they participate and business goals. Include **EDA** and **Gap/SWOT analysis** to see where they are and where they want to be (15%)

   (b) An appropriate **system design**, showing data capture points, analytics requirements etc. Discuss how the solution might integrate customers in the process. Your design should also consider the key analytical requirements for reports, views and dashboards (10%)

   (c) A **database design**, including entity-relationship diagrams and a data dictionary, showing the data structures, fields and relationships (5%)

   (d) **Mock up data** and **data structures** to accommodate your database design. Use Mockaroo or similar tools to create datasets. Show any pre-processing steps required to populate your proposed design (10%)

   (e) The specification document (in PDF) should not exceed 12 pages (including references & NCI Project Submission Coversheet). Every extra page will incur a penalty of 20%. Please indicate *who worked on what* of the specification part.

2. Produce an implementation report (50%), aligned with the project specifications that:

   (a) Describes the **development process** from conceptualisation to implementation. Describe elements that were not initially considered, but were added as the project progressed (10%)

   (b) Includes screenshots and appropriate explanations from your **system implementation**, with Objects (including access controls), Custom Fields, Field Checks, Relationships, Layouts, Validation Rules, Record Types, Lookups, Filters, and Triggers, showing how they fulfil the data management portion of the solution (10%)

   (c) Includes screenshots and propriate explanations of **reports and dashboards** that address the business needs and requirements of the solution (10%)

   (d) Mocks up an **initial response** to the deployed solution. To what degree: has the business gap closed? has the business process improved? has the intended performance been achieved? (10%)

   (e) Reflects on things you have learnt. In **conclusions**: describe the most difficult part of this project; and what you could have done differently. In **future work**: discuss possible mitigation plans and/or potential ideas for further improvement of business goals (10%)

   (f) The implementation report (in PDF) should not exceed 12 pages (including references & NCI Project Submission Coversheet). Every extra page will incur a penalty of 20%. Please indicate *who worked on what* of the implementation part.

Your Report Submission will consist of 2 separate parts (Specification Report) & (Implementation Report) Both parts should be submitted on the same document but will have a clear divider between both reports.

Three Dashboards will be expected to be created by the team, additionally a choice selection of features and workflows should be selected from the chosen CRM solution to be demonstrated both in the implementation report and also as part of the Teams presentation. E.g Marketing Campaign / Dealing with Customer issues / Orchestration of Communications with suppliers or any other features and workflows provided by a successful CRM implementation)

Project Presentation & LIVE Demonstration (10%)

1. **Project presentation and demonstration, to be held in class after the submission deadline.** It should include the following:
   - A concise presentation of the motivation and high-level description of the project.
   - Demonstration – give a demonstration of your application, highlighting the main features.
   - Maximum 8 minutes, every 30 seconds over 9 minutes will incur a penalty of 20%

Note: You must present/demo your project in order to be marked 'Present' for this project. Those who do not, will be marked *'Absent'* **and the other deliverables will NOT BE GRADED.**

Show all developed workflows live and talk through the main insights of the project. Describe in detail what you consider to be the most difficult part to implement. Every extra time taken in the video will be penalised.

The live Demonstration / Presentation will be required by each respective Team.
This will require every member of the group to attend sessions on the week of submission to demonstrate live to the respective lecturers and the examiners.

Notes

1. Submissions not made through Moodle cannot be accepted!
2. AI will neither be entertained nor Accepted
3. The *Presentation/Demonstration LIVE demonstration is mandatory*.
4. You have to submit the following items: specification & implementation reports (in a single Word Document), and code/data (in ZIP) developed for the project.
5. You Must attend the live Demonstration session in the class to defend your work, absence from this live defence will result in you being marked '**Absent**' for this assessment.

Further Clarity , support and instructions will be provided throughout the semester from your respective lecturers. Birds Eye overview can be seen on the below Link:
[MIRO Whiteboard : Birds Eye BIBA Project](#)

	0-39% (Fail)	40-49% (Pass)	50-59% (H2.2)	60-69% (H2.1)	70%+ (H1)
Background & Business goals (15%)	Little or no information on the organisation and/or project scope. Draws on none of the material presented in the module.	Basic and incomplete information on the organisation. The project scope is described but ill-defined. Draws on very little of the material presented during the module.	A good description of the organisation and the scope of the project, drawing on some of the material presented during the module.	A comprehensive description of the organisation and the scope of the project drawing on all of the relevant material delivered as part of the module.	A very thorough description of the organisation and the business environment in which it operates. Draws on material delivered during the module. Evidence of additional relevant reading outside the scope of the module.
Systems Analysis & Design (10%)	The design is largely incomplete or is based on a seriously flawed analysis.	A partially incomplete design based on an analysis that exhibits a number of defects.	A design that is largely complete and is based on reasonable but limited analysis.	A design that covers most of the major elements well and builds on a sound analysis.	A detailed and comprehensive system design
Database Design (5%)	No database design or one that lacks the majority of the expected elements.	A basic design that is missing many required elements.	A good design that supplies most of the major required elements.	A very good design missing only a small number of required elements.	A thorough and exhaustive database design incorporating all of the required elements.
Mock up data and structures (10%)	No evidence that test data was created or where test data is present it is insufficient to adequately demonstrate the features of the solution.	Some test data present but is missing for most objects.	An adequate set of test data is present for key objects but is missing or incomplete for the bulk of other objects.	A fairly complete set of test data shown but is missing or inadequate for a small number of minor objects.	A complete set of data was present for all the objects in the solution.
Development process (10%)	Alternative methodologies not considered, and method selected not justified. Significant errors in the application of methodology.	Alternative methodologies have not been considered and only limited justification for selected methods. Some errors in application.	Alternative methodologies have not been fully considered, though a reasonable attempt made at justifying its use. The methodology has been completely carried out.	Alternative methodologies have been considered and the methodology selected has been justified. The methodology has been competently carried out.	Alternative methodologies have been fully considered and the chosen methodology fully justified. The application has been rigorously carried out.
CRM System Implementation (10%)	No screenshots included in the report, or where supplied, are either missing most of the required information or fail to show that any the supplied design has been implemented.	A small number of screenshots provided but demonstrate only a minor portion of the system and database designs or are missing most of the required information.	A reasonable number of screenshots provided that demonstrate that most of the important elements of the design have been correctly implemented.	Most of the requested elements have been adequately demonstrated by means of the provided screenshots and largely agree with the system and database designs.	The supplied screenshots include all the elements requested and demonstrate that the system/database design have been completely implemented.
Reports , Dashboards & Visualizations (10%)	No reports/dashboards provided or supplied examples do not agree with analytical requirements identified during design phase.	A small number of reports/dashboards provided, which only demonstrate that a part of the analytical requirements has been implemented.	A reasonable but incomplete selection of reports and dashboards, which demonstrate that most of the requirements identified during the analysis phase have been met.	A very good selection of reports and dashboards, demonstrating that a significant majority of the previously identified requirements have been implemented.	A full set of management reports and dashboards that completely demonstrate that the requirements identified during the analysis phase have been met.

Initial response to implemented solution (10%)	Pedestrian or poor attempt to mock up the post-deployment scenario and analyse the findings. Implications and limitations not understood.	Some attempt at mocking up the post-deployment scenario and analysing the findings although with some problems. Implications and limitations not well understood.	A reasonable attempt to mock up the post-deployment scenario and analyse the findings. However, the synthesis of data collected, and theory is not fully achieved. Implications not fully appreciated.	Rigorous scenario & analysis of findings. Demonstrates the ability to synthesise data collected and relevant theory. Shows an understanding of implications of the study.	Rigorous and creative scenario & analysis of findings. Demonstrated ability to synthesise data and relevant theory. Insightful conclusions which appreciate limitations and implications of the study.
Conclusions & future work (10%)	Very limited use of theory and concepts	Limited use of theory and concepts	Reasonable use of theory and concepts but lack of breadth in relevant problem-solving literature.	Comprehensive use of relevant theory and concepts. Evidence of breadth in relevant problem-solving literature.	Critical application and critique of relevant theory and concepts. Evidence of breadth and depth of relevant problem-solving literature.
Presentation Demo Live Defence (10%)	Presentation/Demo was incomplete and unsatisfactory, Questions were inadequately answered.	Presentation/Demo was incomplete, some questions were adequately answered.	Presentation/Demo was adequate, Questions were adequately answered	Presentation/Demo was satisfactory, Questions were well answered.	Presentation/Demo was of a calibre beyond the expectation of the programme, Questions were answered beyond the expectation of the programme.