Faculty Information and Communication Technology

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Template for Project IDC30BT

Software Development students are required to propose a three tier system, which is a client-server application where the user interface, processing logic and data management functions are physically separated.

You are required to follow the given template, and consult where necessary.

Phase 1 (Proposal)

SUBMISSION DATE:

	Task	Description	Mark Allocation
1.	**Name of the Project**	• Name the Project	
2.	**Domain Analysis**	• Explain the general field of business • Show understanding of terminology/glossary being used • Show the general knowledge and understanding of the business environment • Tasks and procedures currently performed • Customers and users • Competing software • Similarities to other domains	6

3.	**Define the Problem**	• Express the Difficulty you want to solve from the domain • Or Opportunity that will result in benefit or improved productivity or sales	4

4.	**Define the Scope**	Narrow the scope by defining a more precise problem
		• Apply knowledge of **Integrated Result Based Management** (IRBM) to define the Inputs, Activities, Outputs, outcomes, and the Impact that the application will have on the community
		• Answer the following questions:
		  • Assess: What is the current situation?
		  • Think: What caused it? Who is involved?
		  • Envision: What are we going to achieve?
		  • Plan: How are we going to do it? With whom? When? With what resources?
			10

5.	**Vision and Objectives**	Write the Vision and Objectives (according to **SMART** principles) of the project	4
6.	**Users of the System**	Indicate the users of the system and their roles	
7.	**Mandatory Functions**	• The system should be able to Add/Register, Delete/Remove and Update data in the database	6

8.	**Functional Requirements** **(Each functionality counts 2 marks)**	• Write the aspect of what the proposed system must do, which contribute in solving the customer's problem and represents a negotiated agreement among stakeholders • What inputs and outputs should the system accept • What computations should the system perform • The timing and synchronization of events	50
9.	**Non-functional requirements**	• Describe Authentication(login/ logout) • Describe Availability	4
10.	**Use Case**	• Describe sequence of actions that a user performs in order to complete a given task as a key activity in requirements using a diagram • This should cover full sequence of steps from beginning to until the end of the task • Describe the user's interaction with the system and **not** computations performed by the system • And **not** actions a user does manually	16
11.	**Tools and Technologies to be used**	a) Indicate the tools you intend to use for the project (e.g. Java, PHP, ASP, etc.)	

Total 100

Phase 2 (Modelling with Classes)

SUBMISSION DATE:

	Task	Description	Mark Allocation
1	**Class Diagrams**		10
2	**Sequence Diagram**	• Visualize how the system runs • Built from use case and class diagram	10
3	**State Diagrams**	• Describe the behavior of the system, activities and their transitions	10
4	**Activity Diagrams**	• Describe the flow of objects and components • Show representations of concurrent activities	10
5	**Component Diagrams**		5
6	**Deployment Diagram**		5

Total 50

Phase 3 (User Interface)

SUBMISSION DATE:

	Task	Description	Mark Allocation
1	**Design User Interfaces**		10
2	**Demo the Prototype**		15
3	**Evaluate User Interface**	• Use Heuristic Evaluation and report the possible usability defects	5
4	**Validate Fields**	• Verification and Validation	10

Total 40

Phase 4 (Build the Database and Demonstrate Integration)

SUBMISSION DATE:

	Task	**Description**	**Mark Allocation**
1	Build the database	• Define data structures	10
2	Manage objects	• Show objects, schema and integrity constraints	10
3	Normalization Process	• Normalize your database	10
4	Manipulate your data	• Populate your database using a script	10
5	Manage transaction	• Create transactions and database queries • This must correlate with functional requirements and use case	20

Total 60

Phase 5 (Final Project Deliverance)

SUBMISSION DATE:

	Task	**Description**	**Mark Allocation**
1	Application	• Fully working system • User Interface, Process Logic and Database integrated as a 3-tier system in a client server architecture	20
2	Document on Test cases and Test plan	• Compile a Test Case document and Test Plan for quality assurance on the system	15
3	Reports	• List reports to be generated by the system	5
4	Final Deliverable must include	▪ Application deployment execution and manual ▪ Application archive (.war/.ear) with source code ▪ Database backup and DDL Script ▪ Complete Source code	10