

*It is strongly recommended that you read this document **several** times before making any start.*



*Comhairle na nDámhachtainí Breisoideachais agus Oiliúna*  
**Further Education and Training Awards Council**

## **Information Technology CITXX (Clonmel Central Technical Institute)**

# **Computer Architecture and Systems C20012**

*Academic Year 2009-2010*

## **PROJECT BRIEF**

**This project counts as 60% of the total module**

## **What the company does**

Leeky Logic Ltd is a newly formed company on the outskirts of Clonmel. It proposes to teach fundamental computer skills in an easy to use, reliable environment. It's current intent is to target younger students primarily.

## **Company premises & location**

The premises upon which the company will operate is a portion of a tillage farm near to the N24 Clonmel bypass. One of the daughters of the family that owns the farm has recently qualified with a BSc and HDE and sees little opportunity for employment in her preferred subject area in her home region.

Since the farming business and output is not as favourable as it once was, the family have agreed to this unusual diversification since much of their property is either idle or under utilised. The new business will make use of a currently vacant building on the property that is physically separated from the farm proper.

This building has numerous rooms including two which are thought to be ideal for twelve seater computer rooms. 12 is the number of students envisaged per class group. There is also an area inside the front door that will easily convert to a reception area. There are one or two smaller storage rooms as well.

## **Company employees**

At present the issue of who and how many work in the company is of lesser importance than how many students can comfortably be coped with. However, in each of the two proposed computer tutorial rooms a tutor workstation is required.

In the reception area a computer is required for whomsoever will be operating that area plus one other for tutor class preparation.

## **Materials the company uses**

The company will use computers that enable them to teach Word Processing, Spreadsheets, Graphics, The Internet etc. It would also be envisaged that a wide range of educational games be provided for the learning of basic mouse/keyboard/screen literacy skills by children. They are open to the use of Internet based tools of this sort.

They will also want access to such scanners and printers in each room that you can justify and afford. Digital camera(s) are to be purchased also. Such items as graphics tablets are also hoped for.

## **The current solution in place**

The company is moving in to an empty building with no space issues. Furniture will be designed and produced by a family member. Seating will have to be purchased, however.

Networking will be handled for a nominal fee by the electrician who normally does work for the farm. He will provide cabling, sockets, ducting etc. which will be put under the main farm accounts for the duration; you just need to specify what type of cabling, sockets, connectors etc. are required.

Listing and costing of other network components such as hubs and/or switches, wireless connectivity are your responsibility. The electrician will position these according to your design. You are also responsible for the selection and pricing of broadband provision.

## Overview of requirements

You must select all hardware and software required to enable a comprehensive solution to be implemented enabling the company to achieve its business aim. Whilst you will need to list suppliers, products and prices for the hardware and software required, you need only specify the network wiring infrastructure details.

Your budget is €15,000, based on what the family feels it can invest plus a bank loan. There is a hope that some extra capital may become available from one or other of these sources.

If it is completely necessary to exceed this amount you may do so, but to a maximum of 10% of the budgeted value and then only with logical, well-expressed reasons. **NOTE:** Exceeding the budget without valid reasons may have implications for the marks awarded to your project.

## Restrictions

You may assume that no VAT needs to be paid as these purchases are to facilitate the company in carrying out its normal business. There is no requirement to allow for labour costs for installation of hardware, software or infrastructure. All purchases must be one to be made in The Republic of Ireland or as a last resort The United Kingdom, online, with shipping costs allowed for. All values must be expressed in €.

## Brief Specification of Requirements

Provide, in accordance with the marking scheme in the module descriptor (page 12), an initial A4 page in which you specify the purpose of the project, sources of information are identified, a plan of progress for the project. This initial page should provide a discussion about the broad overview of the IT solution you propose putting in place.

Thereafter your project should be clearly structured and tidily presented according to standard formatting rules and show:

1. “clear understanding and application of concepts in computer architecture and systems
2. appropriate use of research, with careful observations and recording of relevant information
3. comprehensive analysis and evaluation of the system
4. logical conclusions/recommendations based on evaluation”

You are required to use your imagination in the completion of the system design/layout. You will also be required to list *all* items to be purchased. This list will include cost, function, purpose, source and justification for each item.

*Please note that there is no one right answer to this project. There are many valid solutions, as long as there good reasons for the solutions offered. Considerable imagination and application of topics covered during the year is required.*