

Pearson Higher Nationals in Computing

PEARSON SET ASSIGNMENT

UNIT 6: Managing a Successful Computing Project

For use with the following qualifications:
Pearson BTEC Level 4 Higher National Certificate and
Higher National Diploma in Computing
Issue 1




Edexcel, BTEC and LCCI qualifications

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Unit Planning

The aim of this unit is to offer students an opportunity to demonstrate the skills required for managing and implementing a project. They will undertake independent research and investigation for carrying out and executing a computing project which meets appropriate business aims and objectives.

The project brief will be set by the centre, based on a theme provided by Pearson (this will change annually). The theme and chosen project within the theme will enable students to explore and examine a relevant and current topical aspect of computing in the context of the business environment.

Centres should consider the best way to deliver the unit according to the needs of the students. Possible delivery methods include whole-class teaching, small group teaching, or e-learning. Deliverers could be tutors, appropriate members of the community or representatives from relevant employment sectors.

The unit should be taught in the way(s) most appropriate to the students and the centre. Some suggestions include:

- a block of lessons at the start of the course
- lessons throughout the course
- small-group teaching, focusing on relevant aspects
- teaching of, or seminars on, project management and/or subject-specific skills delivered by external experts.

Delivery should include the development of:

- project management skills
- research skills
- writing, investigative, field study, performance or production skills, as appropriate presentation skills.

Please note that there is a suggested scheme of work for this unit linked to HN Global at www.highernationals.com.

The role of the Tutor

All students should have initial guidance in planning their work and regular monitoring meetings. However, when reviewing drafts of students' work, tutors should ensure they use their professional judgement and do not give excessive guidance. The student should meet individually with their tutor to monitor the project and ensure it is progressing in an appropriate direction and at a pace which will enable the student to meet the assessment requirements. Interim reviews should be held as necessary and documented by the student in the logbook. Students will perform best if some time is allocated within the normal centre timetable for working on the project. The tutor must be able to authenticate the work as the student's own, which can be done by regular monitoring of progress and conducting interim reviews.

Milestones and interim feedback

The purpose of milestones is to monitor the progress of the project and to maintain momentum, making it more likely that the project will succeed. Each milestone should be a clear, achievable activity that the student aims to achieve by a particular time. Students should agree at least two milestones with their tutor. Examples of milestones include:

- producing a first draft of findings
- completing all primary research.

At each milestone, the tutor liaises with the student to check whether it has been achieved. They may need to redirect the student if necessary.

Authentication of a project

Centres are to provide confirmation of the authenticity of a project. It is important that students are made aware of the issue of plagiarism. Students are required to sign a declaration stating that the work they are submitting is their own.

Guidance for Tutors

- Project briefs for this unit must be based on a theme released by Pearson in the first week of June of every year.
- On the following pages, there is an example of a project brief. You will set the topic based on the theme and the type of project to be undertaken. All students must complete the project for the chosen topic in order to complete learning outcomes for this unit.
- The topic and type of project chosen must be appropriate for small-scale research. The project must balance the duration of time committed to delivering input to support student's research and the time necessary to conduct the project.
- The project topic and type of project should be verified by the Programme Leader as part of the internal verification process.
- Group work is not appropriate for this project. Student work must be individual.
- Teaching delivery must include how the student should go about planning, researching, conducting, recording and reflecting on the project.
- It is good practice for your scheme of work to include individual student support appointments to support and monitor completion of the project, and project workshops to give the students the opportunity to complete each stage of the project.
- Encourage students to keep notes of their progress in a logbook, as this is a mandatory requirement for this unit.

- Students will need to reflect on the success of their project and their own performance in a personal performance review at the end of the project. This is a written reflection of 500 words (students will not be penalised if they exceed this word limit). It is advisable to provide students with an appropriate structure for this reflection (see the Performance Review template below).
- The project could take the following forms but these are not exclusive:

Types of Project	Examples
Research based	<ul style="list-style-type: none"> • Requirement specification • Systems analysis • Feasibility study
Development	<ul style="list-style-type: none"> • Software systems • Hardware systems • Algorithms • Designs
Evaluation	<ul style="list-style-type: none"> • Several approaches to a particular problem • Two or more programming languages • Different user interfaces
Problem solving	<ul style="list-style-type: none"> • Develop a new technique to solve a problem • Improve a current system • Evaluate different approaches • Alternative implementations

Templates for Evidence Collection

The logbook template and performance review questions are examples of what can be used, but tutors can devise or use other appropriate resources if they wish to do so.

Project Logbook Template

Name:
Project title:
Date:
Update on weekly research/tasks achieved Points to consider: What have you completed? Did you fulfil task requirements? Are you on track and within deadlines set? Did you need to make any changes to your project management plan?
Any risks and/or issues identified? Points to consider: Did you identify risks/issues with a lack of skills required for undertaking research/tasks? Did you identify any additional risks/issues that have an impact on the project management plan?
Problems encountered Points to consider: What barriers did you face? How did you overcome them?
New ideas and change of project direction

What have I learnt about myself this week?**Points to consider:**

How did I feel when I had to deal with tasks/problems?
Did I find it useful to complete the tasks?
How well have I performed? What did I contribute?
What can I improve on next week?
How might this learning apply in the future?

Tasks planned for next week**Points to consider:**

Which tasks are priority?
Have you set aside sufficient time for completion?

Project plan status to date (on, ahead, behind)**Supervisor comments to address**

Performance Review Template

Performance Review

- What was the project supposed to accomplish?
- Did the project succeed in its aims? How do you know? Specifically, outline any evaluation and assessment undertaken.
- What things do you think worked well and why? Evaluate all aspects of the project (e.g. initial inception, project activities and project outcomes) from a range of perspectives.
- What problems emerged during the project and how were they tackled? Was there timely identification of issues and resolution during the project process?
- What did you learn from undertaking the project?
- How would you rate your performance as project manager?
- What strengths and weaknesses of your performance did you identify?
- How will this inform and support your continuous professional development?

Guidance for Students

You should read this information before starting on your project. You should refer to these instructions as you complete work for this unit.

- Read the brief and think about what the project brief is asking.
- Research what the project brief is asking. How can you approach the problem, opportunity, hypothesis and requirements being posed?
- Apply a range of secondary research sources to plan/scope and support the project and its findings. Secondary research sources may include textbooks, journal articles, newspapers and magazine articles (not factual accounts).
- Develop your project plan based on the deliverables of the project, the constraints of the project and the assumptions made.
- Conduct your project according to your stated project plan and meet with your tutor to receive a sign-off at each stage of the project process.
- Primary research sources may include original first-hand accounts, legal and historical documents, results of experiments and market research data collection. Apply both qualitative and quantitative research methods to evaluate data collected from primary research.
- Keep notes of your progress throughout the project in your **logbook**. This is an important record of your work and must be used to record the development of your ideas and your progress through the project. The logbook should include:
 - A record of what you did, when and what you were thinking.
 - A record of where things went wrong and what you did to overcome any unexpected results.
- You will be asked to reflect on the success of your project and your own performance in a **personal performance review** at the end of the project. This is a written reflection of around **500 words**.
- Set out below is an example of a project brief. Your centre will set the topic for the brief based on a theme released by Pearson every year in the first week of June.
- You must complete the project in order to complete your work for this unit.

Project Brief

Your Tutor will provide you with the scenario and the type of project to be completed based on a topic related to the theme.

- Establish your aims and objectives for the project. Outline objectives and timeframes based on the scenario set by your tutor.
- Produce an appropriate project management plan that includes relevant actions to meet objectives and timeframes.
- Conduct research to generate knowledge which will form the basis for analysis of the scenario posed in the brief.
- Analyse your findings and draw conclusions to form the basis for recommendations.
- Present and produce your project in an appropriate manner for the intended audience.
- Communicate your recommendations in an appropriate manner for the intended audience.
- Complete a performance review that addresses the following:
 - The success of the project and its usefulness in supporting organisational performance.
 - Your own performance.

Assessment Criteria

Pass		Merit	Distinction
LO1 Establish project aims, objectives and timeframes based on the chosen theme.			LO1 & 2 D1 Critically evaluate the project management process and appropriate research methodologies applied.
P1 Devise project aims and objectives for a chosen scenario. P2 Produce a project management plan that covers aspects of cost, scope, time, quality, communication, risk and resources. P3 Produce a work breakdown structure and a Gantt Chart to provide timeframes and stages for completion.	M1 Produce a comprehensive project management plan, milestone schedule and project schedule for monitoring and completing the aims and objectives of the project.		
LO2 Conduct small-scale research, information gathering and data collection to generate knowledge to support the project.			
P4 Carry out small-scale research by applying qualitative and quantitative research methods appropriate for meeting project aims and objectives.	M2 Evaluate the accuracy and reliability of different research methods applied.		
LO3 Present the project and communicate appropriate recommendations based on meaningful conclusions drawn from the evidence findings and/or analysis.			LO3 & 4 D2 Critically evaluate and reflect on the project outcomes, the decision-making process and changes or developments of the initial project management plan to support justification of recommendations and learning during the project.
P5 Analyse research and data using appropriate tools and techniques. P6 Communicate appropriate recommendations as a result of research and data analysis to draw valid and meaningful conclusions.	M3 Evaluate the selection of appropriate tools and techniques for accuracy and authenticity to support and justify recommendations.		
LO4 Reflect on the value gained from conducting the project and its usefulness to support sustainable organisational performance.			
P7 Reflect on the value of undertaking the research to meet stated objectives and own learning and performance.	M4 Evaluate the value of the project management process and use of quality research to meet stated objectives and support own learning and performance.		