

Project Management Skills Portfolio

(1) Business and IT Skills Portfolio

Task (a) → Transferable skills self assessment

1. Communicating

Rating prior to the assignment: 7/10

I frequently utilised my communication skills in professional and academic contexts before doing this assignment. In collaborative assignments at university, I would frequently take responsibility to make sure everybody on the team understood their duties, clarify requirements, and highlight important points. I spoke with customers on every day in my part-time job in sales and marketing, modifying my tone depending on the person I was speaking to and their needs. I gained confidence in being able to listen carefully and clearly as a consequence of this. During hackathons, where quick and effective communication was crucial for organising tasks under limited time, I also gained knowledge presenting ideas.

2. Researching & Analysing

Rating prior to the assignment: 8/10

Prior to this assignment, I regularly applied my research and analytical abilities in both academic and technical development projects. I researched database structures, machine learning models, and APIs to support the system design for projects like AI Vest and Cognivue. In order to make well-informed design decisions, I also examined user requirements, technical constraints, and performance standards. Before writing reports or putting solutions into practice, I regularly investigated ideas, contrasted frameworks, and assessed various strategies for university coursework. Even in my sales and marketing job, I utilised customer behaviour evaluation to alter my tactics. These interactions enhanced my ability to gather data, assess it critically, and apply it effectively.

3. Problem Solving & Decision Making

Rating prior to the assignment: 8/10

I mostly utilised technical computer programming challenges and collaborative tasks to improve my problem-solving and decision-making abilities. To be able to preserve the project's momentum during hackathons, unanticipated bugs or time constraints required prompt, logical choices. I often had to diagnose problems, test solutions, and select the most effective solution when working on AI Vest or Cognivue because of backend problems, deployment errors, or inconsistent data. Even at my Full-time job over the summers, I made quick choices to manage customer lines or fix issues during peak hours. My ability to evaluate options, evaluate critically, and make rational choices under pressure has increased as an outcome of these experiences.

Task (b) → Reflection for each skill on this module assignment

1. Communicating

Rating after the assignment: 8/10

Post-assignment evidence (STARS)

S – Situation:

In the project management assignment, I needed to interpret the brief, clarify expectations, and communicate ideas clearly while preparing the WBS, CPA, budget, and risk register.

T – Task:

My task was to ensure I understood requirements correctly and could communicate questions or uncertainties effectively when discussing the assignment with peers or asking lecturers for clarification.

A – Action:

I broke down complex concepts into simpler steps, used structured note-taking, and created visual sketches (like dependency diagrams) to confirm my understanding. I also used Teams, email, and group discussions to double-check calculations and clarify instructions.

R – Result:

This reduced confusion and improved the accuracy of my assignment work. Explaining project decisions reinforced my understanding of sequencing, budgeting, and risk logic.

S – Self-Reflection:

The assignment strengthened my communication by forcing me to articulate project-based reasoning clearly. According to Jackson (2016), communication is a core employability competency that supports teamwork and professional effectiveness. My confidence remained high because I demonstrated clear, structured communication in a technical context.

2. Researching & Analysing

Rating after the assignment: 9.5/10

Post-assignment evidence (STARS)

S – Situation:

The assignment required understanding project management concepts like critical paths, risk assessment, and resource allocation.

T – Task:

I needed to research definitions, methods, and examples, then analyse how to apply them correctly to the project scenario.

A – Action:

I revisited lecture slides, watched PM-related videos, compared different WBS templates, and analysed sample CPA diagrams to understand how dependencies and float calculations worked. I also analysed cost breakdown examples to plan an accurate resource budget. While researching risks, I reviewed typical risk categories and assessed their relevance to the assignment.

R – Result:

My research and analysis improved the quality of my diagrams and calculations. I became more confident applying PM methods because I understood *why* each step was necessary.

S – Self-Reflection:

This assignment strengthened my analytical thinking. According to Bloom's taxonomy (1956), analysing and evaluating information are higher-order skills essential for academic and professional performance. My confidence increased because I realised I can research complex concepts and apply them correctly.

3. Problem Solving & Decision Making

Rating after the assignment: 9/10

Post-assignment evidence (STARS)

S – Situation:

While preparing the assignment, I faced challenges such as unclear dependencies in the WBS, cost estimation decisions, and sequencing tasks for the CPA.

T – Task:

I had to identify mistakes, test solutions, and make decisions about durations, risk priorities, and resource allocation.

A – Action:

I used trial-and-error to verify the CPA logic, recalculated paths when numbers didn't match, and made decisions based on reasoning rather than guesswork. I prioritised risks using probability/impact assessment and chose cost allocations based on realistic estimates. When unsure, I compared alternative approaches and selected the most logical one.

R – Result:

My diagrams became more accurate, and I made better decisions regarding task sequencing and budgeting. The structured approach reduced errors and increased reliability.

S – Self-Reflection:

My critical problem-solving abilities have been improved through the assignment. The work of Kahneman (2011) along with other decision-making literature emphasise the importance of analytical thinking over intuitive short cuts. I feel much more confident using rational methods to solve structured problems once I've completed this assignment.

Task (c) → Development Action Plan

1. Researching & Analysing

Since research and analysis are essential to my academic work as well as my future goals in project management and computing, I chose them as a critical skill to hone. Whether evaluating project requirements, contrasting approaches, or verifying assumptions, I discovered during this module how frequently sound research supports sound decision-making. Therefore, developing this skill will be vital to my coursework as well as my future career, where making choices based on data is essential.

To develop this skill further, I will follow a SMART plan. For the next twelve weeks, I will write one research summary every two weeks based on topics linked to computing or project management. This gives me structure, keeps the goal achievable, and provides clear evidence of progress. It is relevant to both my academic journey and career goals, and it is time-bound as I must complete six summaries within the set timeframe. Furthermore, I plan to take part more actively in groups like the Data Science Society and attend library workshops on academic research methods. The idea that participation in shared academic communities enhances learning is supported by Wenger's (1998) research on communities of practice. I will enhance my ability to assess data, weigh options, and effectively defend decisions by using this systematic method.

2. Problem Solving & Decision Making

I selected solving problems and making choices because these skills have an immediate effect on my ability for handling difficult project tasks, particularly in technical environments. I got conscious of how often I utilise problem-solving abilities after finishing this assignment, from assessing threats and assigning supplies to interpreting the critical path. As it shows independence and the ability to work under pressure, employers frequently rank this skill as one of the most crucial for new graduates (Nickson, 2023). Growing this capacity will help me achieve my goals of working in artificial intelligence and software engineering, subjects that call for organised decision-making and logical reasoning.

Consistent, beneficial enhancement is the main goal of my SMART development plan. I'll use assets like LeetCode or HackerRank to finish two established problem-solving assignments every week for the next ten weeks. This goal can be both *specific* as well as *measurable* as progress can be tracked after challenges are eliminated. These tasks are *relevant* and *achievable* because they resemble practical debugging and technical problem-solving scenarios, and they build on my prior coding experience. It has a weekly demand and is time-limited.

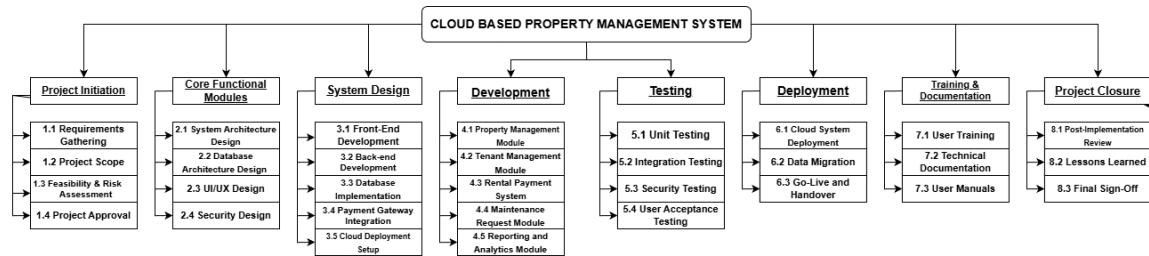
In spite of practicing alone, I'd like to join project-based societies and take part in at least one hackathon to practise making decisions in collaborative settings with limited time. The idea that solving problems are significantly improved by practical participation, reflection, and iteration is backed by Kolb's Experiential Learning Theory (2014). I'd like to enhance my ability to breakdown complex problems, evaluate my options, and make sound choices in professional as well as educational environments by combining regular technical practice with practical use.

Task(d) → Skills-Based Volunteering

Volunteering Role	Justification Linked to ENTJ Personality Strengths
1. Project Coordinator / Event Organiser	Project-based volunteering is an excellent match for me because, as an ENTJ, I am naturally effective at organising, planning, and coordinating people. Since scheduling, delegation, and decision-making are essential in event management roles, ENTJs thrive on creating structure, creating goals, and making sure a team works smoothly. I may utilise my leadership skills and acquire actual project management experience through this kind of volunteering. It also fits with my inclination to take charge and simplify challenging duties.
2. Youth Leadership Mentor / STEM Workshop Facilitator	ENTJs are regarded as confident communicators who enjoy delight in teaching, guiding, and encouraging others. I will put my communication skills, strategic thinking, and ability to solve problems to use by volunteering as a mentor or workshop facilitator. This position of power matches my innate desire to use structured learning to support others with growing and becoming better.

Volunteering Role	Justification Linked to ENTJ Personality Strengths
	additionally helps me to enhance my coaching skill sets, emotional intelligence, and patience—skills which will be essential in management or technology leadership jobs in the future.
3. Charity Strategy or Fundraising Team Member	Planning, setting objectives, and making analytical choices are skills that ENTJs tend to be excellent at. My skills make me ideal for volunteering in strategic planning, that includes establishing goals, analysing information, and establishing plans of action to advance a cause. Charity operations involve goals, KPIs, and quantifiable results, all of which appeal to ENTJs. Furthermore, the position presents an intentional way of applying organisational, resource allocation, and problem-solving skills for positive social impact.

(2) Work Breakdown Structure



1. Project Initiation

1.1 Requirements Gathering

- Work Package: Conduct stakeholder interviews, identify functional and non-functional requirements
 - Role: Business Analyst

1.2 Define Project Scope

- Work Package: Produce scope statement and constraints
 - Role: Project Manager

1.3 Feasibility & Risk Assessment

- Work Package: Assess technical feasibility, risks, timeline
 - Role: Systems Analyst

1.4 Project Approval

- Work Package: Sign-off of project charter
 - Role: Project Sponsor

2. System Design

2.1 System Architecture Design

- Work Package: Define system components, cloud architecture, network design
 - Role: Applications Architect

2.2 Database Architecture Design

- Work Package: ERD diagrams, schema, data mapping
 - Role: Applications Architect

2.3 UI/UX Design

- Work Package: Wireframes, user flow designs
 - Role: Applications Architect

2.4 Security Design

- Work Package: Authentication, authorisation, encryption, GDPR compliance

- Role: Applications Architect
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3. Development

3.1 Front-End Development

- Work Package: Agent dashboard, tenant portal, property search implementation
 - Role: Cloud/Software Engineer

3.2 Back-End Development

- Work Package: API development, business logic, integration services implementation
 - Role: Cloud/Software Engineer

3.3 Database Implementation

- Work Package: Create tables, stored procedures, triggers
 - Role: Cloud/Software Engineer

3.4 Payment Gateway Integration

- Work Package: Secure rental payment processing, automated receipts setup
 - Role: Cloud/Software Engineer

3.5 Cloud Deployment Setup

- Work Package: Configure hosting, virtual machines, CI/CD pipeline
 - Role: Cloud/Software Engineer
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4. Core Functional Modules

4.1 Property Management Module

- Work Package: Property listing, availability tracking features implementation
 - Role: Cloud/Software Engineer

4.2 Tenant Management Module

- Work Package: Tenant profiles, documents, tenancy agreements features implementation
 - Role: Cloud/Software Engineer

4.3 Rental Payment System

- Work Package: Rent payment, overdue reminders, payment history features implementation
 - Role: Cloud/Software Engineer

4.4 Maintenance Requests Module

- Work Package: Tenant maintenance tickets, status tracking features implementation
 - Role: Cloud/Software Engineer

4.5 Reporting & Analytics Module

- Work Package: Financial reports, occupancy reports, dashboards development
 - Role: Applications Architect
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5. Testing

5.1 Unit Testing

- Work Package: Component testing (75% ownership)
 - Role: QA Tester

5.2 Integration Testing

- Work Package: System-wide interaction testing

- Role: QA Tester

5.3 Security Testing

- Work Package: Penetration testing, vulnerability testing
 - Role: Applications Architect

5.4 User Acceptance Testing (UAT)

- Work Package: Final user testing with letting agents
 - Role: QA Tester

6. Deployment

6.1 Cloud System Deployment

- Work Package: Deploy final system on cloud infrastructure
 - Role: Cloud/Software Engineer

6.2 Data Migration

- Work Package: Transfer existing tenant/property data
 - Role: Cloud/Software Engineer

6.3 Go-Live & Handover

- Work Package: Release to production environment and formal handover
 - Role: Project Manager

7. Training & Documentation

7.1 User Training

- Work Package: Conduct training for letting agents
 - Role: IT Training Consultant

7.2 Technical Documentation

- Work Package: System documentation for IT team
 - Role: IT Training Consultant

7.3 User Manuals

- Work Package: End-user help guides development
 - Role: IT Training Consultant

8. Project Closure

8.1 Post-Implementation Review

- Work Package: Evaluate performance vs. objectives
 - Role: Project Manager

8.2 Lessons Learned

- Work Package: Document lessons for future projects
 - Role: Project Manager

8.3 Final Sign-Off

- Work Package: Approval from sponsor
 - Role: Project Sponsor

(3) Budget for Resources

Cost Category	Item / Role	Annual Salary (£)	Multiplier (FTE/Staff)	Duration Factor (20/12)	Calculation	Total Cost (£)
1. Staff Costs						
	Project Manager	85,000	0.80	1.667	$\text{£85,000} \times 0.80 \times 1.667$	113,333
	Applications Architects	60,000	3.00	1.667	$\text{£60,000} \times 3 \times 1.667$	300,000
	Cloud/Software Engineers	50,000	4.00	1.667	$\text{£50,000} \times 4 \times 1.667$	333,333
	QA Tester	60,000	0.75	1.667	$\text{£60,000} \times 0.75 \times 1.667$	75,000
	IT Training Consultants	40,000	2.00 ($\times 0.50$ FTE)	1.667	$\text{£40,000} \times 2 \times 0.5 \times 1.667$	66,667
	STAFF COST					888,333
2. Technical Equipment Cost						
	Cloud Server	-	-	-	-	50,000
	Web Server	-	-	-	-	39,000
	Database Server	-	-	-	-	45,000
	10 Desktops	895	10	-	$10 \times \text{£895}$	8,950
	EQUIPMENTCOST					142,950
3. Software Cost						
	Licenses	6,500	10	-	$10 \times \text{£6,500}$	65,000
	SOFTWARE COST					65,000

Category	Cost (£)
Staff Costs	888,333
Equipment	142,950
Software	65,000
Subtotal	1,096,283
+ 10% Contingency	109,628
TOTAL BUDGET	£1,205,911

FINAL PROJECT BUDGET → £1,205,911

(4) Risk Register

ID	Category (PESTLE)	Description	Owner	Likelihood of the risk occurring	Impact if the risk occurs	Overall Impact	Mitigative Action
1	4	Cloud service outage or downtime during peak rental season	Cloud/Software Lead	Medium	High	High	Implement multi-AZ deployment, autoscale, failover
2	4	Cybersecurity breach exposing tenant and payment info	Security Architect	Medium	High	High	Enforce end-to-end encryption, WAF, quick penetration tests

ID	Category (PESTLE)	Description	Owner	Likelihood of the risk occurring	Impact if the risk occurs	Overall Impact	Mitigative Action
3	5	Payment gateway integration fails, blocking rent payments	Software Engineer	Medium	High	High	Integrate at least two payment gateway (Stripe + PayPal)
4	2	Data migration errors causing incomplete or corrupted tenant records	Database Engineer	Medium	High	High	Create automated validation scripts + backup snapshots before migration
5	3	Letting agents resist adopting the new cloud platform	Project Manager	Medium	Medium	Medium	Provide live training demos, a phased roll-out
6	5	Budget overrun due to extra development needs	Project Manager	Low	High	High	Weekly tracking of scope changes
7	2	Inadequate user training leading to misuse of system	IT Training Consultant	Medium	Medium	Medium	Develop structured training modules with video tutorials
8	1/5	Legal non-compliance (e.g., GDPR) due to poor data handling	Compliance Officer	Low	High	High	Implement GDPR-aligned retention access controls, audit log management
9	5	High dependency on single cloud vendor (AWS/Azure)	IT Director	Medium	Medium	Medium	Explore multi-cloud / cloud-agnostic deployment options
10	4	System performance issues under high user load	Applications Architect	Medium	High	High	Implement caching, load balancer stress-testing

(5) Critical Path Analysis

1. Project Network

Because diagrams cannot be drawn here, below is the **network structure described step-by-step:**

- A → flows into C and D
- B → flows into D
- C → flows into F
- D → flows into E

- **E** → flows into **F** and **H**
- **F** → flows into **G**
- **G** → flows into **H**

This structure is what the network diagram would visually represent.

2. Forward Pass (Earliest Start & Finish Times)

Activity	Time	Predecessor	ES	EF
A	9	—	0	9
B	14	—	0	14
C	13	A	9	22
D	9	A, B	14	23
E	10	D	23	33
F	7	C, E	33	40
G	8	F	40	48
H	11	E, G	48	59

Project completion time (minimum) = 59 weeks

3. Backward Pass (Latest Start & Finish Times)

Start from the final activity **H** (**EF = 59**):

Activity	Time	Successor	LF	LS
H	11	—	59	48
G	8	H	48	40
F	7	G	40	33
E	10	F, H	min(33, 48) = 33	23
D	9	E	23	14
C	13	F	33	20
B	14	D	14	0
A	9	C, D	min(20, 14) = 14	5

4. Slack (Float) Calculations

Slack = LS – ES

Activity	ES	LS	Slack
A	0	5	5
B	0	0	0
C	9	20	11
D	14	14	0
E	23	23	0
F	33	33	0
G	40	40	0
H	48	48	0

5. Critical Path

Activities with **zero slack**:

B → D → E → F → G → H

This sequence determines the **minimum project duration**.

Critical Path Duration = 59 weeks
