DTA Capstone Software Project Completed Example

AI Assisted Project Management and Leadership Training Program

Illustrative completed example using DTA's software capstone template. Student Portal Launch SPL-27 follows the Module 02 practice scenario. Named roles, approvals, dates, costs, test results and feedback are illustrative for teaching. No real deployment or student outcome is claimed.

Learner and project	Your response
Learner or team	Girmay Simon, PM; Bekele Diego, technical lead; Chris Abraham, content lead; Helen Teame, QA. Illustrative classroom roles.
Project title	Student Portal Launch / SPL-27
Sponsor and receiving owner	Tesfa Haile, sponsor and Product Owner; Hassen Ali, operations owner. Simulated roles.
Version and date	Worked example v1.0 / 12 February 2027 (simulated closure date).

1 Project brief and business case

Scenario Student Portal Launch SPL-27 provides registration, sandbox payment checks and access to 12 learning modules. This worked example uses Agile delivery within the charter dates and USD 20,000 ceiling.

All later evidence references point to the illustrative records in the appendices. Learners may instead use the traditional project option and its separate DTA template.

Required decision	Your response
Need and value	Fictional training provider needs one enrollment and access process for 12 modules. A discovery exercise found duplicated manual entry and unclear access instructions. Target: a usable pilot and a supportable first release.
Options and recommendation	Do nothing: low setup cost, manual work remains. Hosted form plus manual access: quick, fragmented controls. Configure a portal: selected for integrated access and repeatable checks within the USD 20,000 ceiling.
Feasibility and assumptions	Existing hosting and reviewed content assumed available. Simulated capacity: Bekele 35 h/week, Chris 25 h/week, Helen 30 h/week for six weeks. Confirm capacity before a real authorization. No live payments.
Measurable objective	12 modules reviewed by 29 Jan; two roles tested by 5 Feb; at least 8/10 pilot users complete the flow by 9 Feb; Hassen accepts handover by 12 Feb. All dates 2027; Tesfa Haile owns acceptance.

2 Charter scope and delivery plan

Module links 01 Fundamentals 02 Initiation 03 Planning and Scope

Charter field	Your response
Sponsor authority	Tesfa Haile authorizes the ceiling and material scope changes. Girmay coordinates delivery and sequencing within approved scope. Any reserve draw, baseline change or acceptance exception goes to Tesfa Haile.

Charter field	Your response
In scope and excluded	Include registration, student/instructor access, 12 reviewed modules, sandbox payment tests, enrollment report and support handover. Exclude live payments, external accreditation, enterprise customization and later expansion.
Constraints and assumptions	Window 4 Jan to 12 Feb 2027. Ceiling USD 20,000. Capacity is a simulated planning assumption. No confidential learner data in AI prompts. Use synthetic pilot accounts.
Authorization	A-01: Tesfa Haile approves this simulated charter on 4 Jan 2027, conditional on synthetic data, sandbox-only payment work and weekly reviews. No real signature or funding approval.

Deliverable breakdown and traceability

ID and deliverable	Requirement and acceptance evidence	Owner
1.1 Registration flow	One valid submission creates one enrollment and correct confirmation. Invalid/duplicate submissions are handled. Tests T01-T03.	Bekele
1.2 Role access	Student and instructor permissions stay separate. Unauthorized access fails. Tests T04-T05.	Bekele
1.3 Learning content	12/12 modules pass content checklist C-01 by 29 Jan.	Chris
1.4 Sandbox and report	Test payment states reconcile to enrollment; enrollment report agrees with test records. T06-T07.	Bekele
1.5 Pilot and handover	At least 8/10 users finish the flow. Hassen accepts support and recovery checklist. P-01 and H-01.	Helen / Hassen

Schedule resources and cost baseline

Add rows or attach a ProjectLibre schedule or equivalent. Show dependencies and distinguish estimated cost from approved budget. Explain the basis of estimates and any reserve.

Work package	Predecessor	Start and finish	Owner	Cost USD
1.1-1.2 Portal build	Charter then requirements approval	4-29 Jan 2027	Bekele / Girmay	8,000
1.3 Content review	Charter; parallel to build	4-29 Jan 2027	Chris	6,000
1.4-1.5 QA and pilot	Build + content ready	1-9 Feb 2027	Helen	3,000
1.5 Handover	Pilot accepted	10-12 Feb 2027	Hassen	1,000
Total and reserve	Category estimates, Appendix A	Baseline A-01 / 4 Jan 2027	Tesfa Haile	18,000 base + 2,000 reserve = 20,000

3 Stakeholders communication and risk

Module links 04 Stakeholders 05 Communication 06 Risk

Stakeholder engagement

Stakeholder	Interest and influence	Concern and engagement	Owner
Tesfa Haile, sponsor / Product Owner	High interest and decision authority	Value, ceiling and release scope; Friday decision review	Girmay
10 pilot learners	High interest; acceptance feedback	Accessible registration; guided pilot and short survey	Chris
Hassen, operations owner	High interest; handover authority	Recovery steps and support load; review checklist weekly	Girmay

Communication plan

Audience and purpose	Channel and frequency	Owner	Response or escalation
Sponsor decisions	Friday cost/risk summary; urgent direct call	Girmay	Decision within two working days; record in decision log
Delivery coordination	15-minute weekday check-in; board updated daily	Bekele	Escalate blockers over one working day to Girmay
Pilot / support feedback	Pilot briefing 5 Feb; review 9 Feb; handover 12 Feb	Chris / Hassen	Synthetic data only; record issues and named action owners

Risk register

Assessment scale: probability L <30%, M 30-60%, H >60% (planning judgments). Impact L <=USD 500 or 1 working day; M <=USD 2,000 or 3 days; H above either medium limit or a release blocker. Use the highest applicable impact. Risks are uncertain events; I-01 and I-02 are issues.

Risk and assessment	Response and trigger	Owner and review
R1 Email delivery may fail. P=M, I=H.	Mitigate: test early; failed confirmation triggers technical review. Reserve 2 QA hours. Residual P=L, I=M.	Bekele; weekly; escalate unresolved release blocker to Tesfa Haile
R2 Build delay may reduce testing. P=M, I=H.	Mitigate: agree requirements by 15 Jan; missed approval triggers replanning. Keep testing window. Residual P=L, I=H.	Girmay; weekly; Tesfa Haile approves any date change
R3 Fewer than 10 pilot users may reduce evidence. P=M, I=M.	Mitigate: confirm 10 + two backups by 29 Jan. Trigger: fewer than 10 confirmed. Use Chris's recruitment time. Residual P=L, I=M.	Chris; weekly; escalate shortfall to Girmay
O1 Reusable setup may simplify later launches. P=M, I=M.	Enhance: document configuration during build; trigger is repeatable setup. Hassen reviews reuse potential after pilot. No unmeasured savings claimed.	Hassen; 12 Feb review

4 Quality execution and change control

Module links 07 Quality 08 Execution Monitoring and Control

Quality plan and evidence

Distinguish a process assurance activity from a deliverable control check. Name the preparer, checker and acceptance authority. Reserve time and resources for rework and retesting.

Activity and criterion	Evidence and result	Owner and approver
Control: registration and two access roles meet defined tests	T01-T07 in Appendix B. Initial T03 duplicate case failed; fixed and retested 4 Feb. Final 7/7 pass.	Bekele prepares; Helen checks; Tesfa Haile accepts
Assurance: review test and change process	QA-01, 5 Feb: sampled seven test records. Owners and retest references present. Add earlier duplicate-case review next time.	Helen reviews; Girmay owns improvement
Content and pilot checks	C-01: 12/12 module checklists complete, 29 Jan. P-01: 9/10 users complete by 9 Feb; one needs guidance.	Chris prepares; Helen checks; Tesfa Haile accepts

Status and corrective action

Reporting field	Your response
As of date and baseline	9 Feb 2027; A-01, 4 Jan; ceiling USD 20,000.
Actual versus planned	All four delivery groups ready for closure except final support rehearsal. 12/12 content checks; 7/7 final tests; 9/10 pilot completions. Spend USD 17,100 versus USD 17,000 planned to date.
Forecast and decisions	Forecast USD 18,000, including USD 900 remaining handover. Finish 12 Feb unchanged. Tesfa Haile to confirm pilot acceptance by 10 Feb.
Issue and correction	I-01: duplicate enrollment on retry, detected 2 Feb. Bekele corrected retry handling by 4 Feb. Helen verified T03 retest. Closed; no open critical failures.

Change request record

Change and reason	Impact and decision	Follow-up
CR-01, 5 Feb: sponsor requests live payment activation to speed commercial launch.	Reject for this release: outside sandbox-only scope. Preliminary +USD 2,500 and one week, with unassessed payment/security work. Tesfa Haile records rejection 5 Feb.	Girmay retains A-01 unchanged, updates backlog as deferred, informs team. Verify sandbox-only behavior in T06.

5 Leadership delivery learning and value

Module links 09 Leadership 10 Strategic Leadership 11 Agile

Leadership reflection and delegation

Describe a disagreement or competing priority. Explain your listening, feedback and ethical decision. Choose a leadership style suited to capability and circumstances. Record one delegation with result, boundaries, authority, support and checkpoints.

Situation and decision	Your reflection
Conflict and delegation	Marketing favored live payments; QA needed the agreed test window. Girmay heard both concerns, explained scope and safety checks, and obtained CR-01. Delegation: Bekele owns retry fix, within approved scope, with Helen checking T03 on 4 Feb. No authority to activate live payments. Next time clarify release boundaries at kickoff.

Agile and iterative learning

Illustrative board in Appendix B. Tesfa Haile is Product Owner; Girmay facilitates the Scrum Master responsibilities; Bekele and Chris perform Developer work, with Helen supporting verification. Sprint 1 goal: a usable registration flow and reviewed content. Sprint 2 goal: verified access, a usable pilot and support handover. Completion requires peer review, acceptance checks and no open critical defects.

Priority and user story	Acceptance and completion	Sprint and result
1 Student registers and receives correct confirmation	One enrollment per valid request; invalid and duplicate cases handled. T01-T03 pass.	Sprint 1, 18-29 Jan: accepted 29 Jan except retry defect later found and corrected in Sprint 2.
2 Learner or instructor accesses only permitted content	Both roles pass access tests; 12 modules reviewed. T04-T05 and C-01.	Sprint 1: content/configuration complete 29 Jan; final access checks pass 5 Feb.
3 Support owner sees reliable enrollment status	Sandbox status and report reconcile. T06-T07 pass; handover checklist reviewed.	Sprint 2, 1-12 Feb: usable pilot 9 Feb; handover 12 Feb.

Sprint review, 9 Feb: Tesfa Haile accepts the usable pilot and defers live payment activation. Retrospective, 10 Feb: team adds duplicate-case checks before build review. Helen will verify their inclusion at the next refinement session.

Strategic alignment and benefits

Goal and output	Outcome measure	Owner and review
Improve training access; deliver usable first release	Pilot target >=8/10 complete flow; observed 9/10. Source P-01, 9 Feb. Small simulated pilot does not establish future demand or business impact.	Tesfa Haile / Hassen; review 12 Feb
Close project and transfer operations	Acceptance criteria met; forecast within ceiling. Tesfa Haile closes simulated delivery on 12 Feb. Future commercial release requires separate authorization.	Tesfa Haile; next benefits review 12 Mar 2027

6 Closure submission and assessment

Module link 12 Closure Evaluation and Lessons Learned

Acceptance and operational handover

Closure record	Your response
Acceptance	A-02: Tesfa Haile accepts 12 modules, registration/access, sandbox/report and pilot on 12 Feb 2027. Evidence C-01, T01-T07, P-01 and H-01. All decisions simulated.
Handover	H-01: Hassen receives access-role matrix, test recovery steps, issue log and support guide. Rehearsal complete 12 Feb. Operating handover is simulated; no public launch is claimed.
Open obligations	I-02: one pilot user needs clearer navigation help. Hassen owns help-text update by 19 Feb, accepted as noncritical. Live payments remain deferred, not an open delivery defect.
Evaluation and release	Completed 12 Feb; final cost USD 18,000, USD 2,000 below ceiling. 9/10 pilot success. Tesfa Haile releases project team 12 Feb. Support follow-up remains with Hassen; benefits review 12 Mar.

Event cause and consequence	Actionable lesson	Owner and application
Retry handling was omitted from early review; T03 failed.	Include duplicate/retry acceptance cases before the first build review.	Bekele and Helen; next backlog refinement
One pilot user could not find the next action.	Test instructions with a first-time user before pilot recruitment.	Hassen; help-text review 19 Feb
Live payment request threatened agreed scope and test time.	Make exclusions visible in kickoff and every release review.	Girmay; next project charter review

Submission evidence

Evidence supplied here: schedule and cost record in Appendix A; test, board and handover records in Appendix B; change decision and responsible AI record in Appendix C. Every supporting record is an authored simulation. Learners must supply their own evidence for assessment.

Assessment rubric

Criterion	Points
Business need feasibility and charter	15
Scope traceability schedule and cost	20
Stakeholders communication and risk	15
Quality delivery evidence and change control	20
Leadership Agile learning and strategic value	15
Closure lessons and professional evidence	15
Total	100

For each criterion, full marks require complete, consistent, justified work supported by evidence. Partial marks reflect missing detail or weak evidence; absent or unusable work earns zero. The instructor applies the program assessment policy.

Responsible AI record: see Appendix C. All records are illustrative.

Appendix A Schedule and cost evidence

A-01 is the simulated baseline approved 4 January 2027. Dates below are calendar dates; effort is planned hours. Sprint dates exclude the initiation period. These are planning records, not evidence of real work.

Package	Predecessor	Window in 2027	Planned effort	Evidence
M1 Charter	None	4 Jan	PM 8 h	A-01
M2 Requirements and design	M1	5-15 Jan	Tech 35 h; content 20 h	R-01, approved 15 Jan
M3 Portal build	M2	18-29 Jan	Tech 65 h	B-01
M4 Content preparation	M1; matches M2	5-29 Jan	Content 70 h	C-01
M5 Final tests	M3 and M4	1-5 Feb	Tech 20 h; QA 30 h	T01-T07
M6 Pilot	M5	8-9 Feb	QA 10 h; content 10 h	P-01
M7 Handover and close	M6 accepted	10-12 Feb	QA 20 h; ops 12 h	H-01, A-02

Staffing check: technical effort is 120 h, with a 65 h peak across the two build weeks, within 35 h/week availability. Content effort is 100 h, including 90 h before 29 Jan, within 25 h/week availability over four weeks. QA effort is 60 h, with 30 h in the final test week, within 30 h/week availability. A detailed resource-loaded plan remains a useful supporting improvement.

Category	Basis of baseline estimate	Baseline USD	Final USD
Content	100 h x blended USD 60	6,000	5,800
Portal	120 h x blended USD 66.67, rounded	8,000	8,200
Quality and pilot	60 h x USD 50	3,000	3,100
Handover	12 h plus guide/materials allowance	1,000	900
Base cost	Sum of four categories	18,000	18,000
Contingency	Sponsor-controlled allowance	2,000	0 used
Authorized ceiling	Base plus contingency	20,000	18,000 final spend

Cost record: 9 Feb spend USD 17,100 plus USD 900 forecast remaining = USD 18,000. Closure record on 12 Feb confirms USD 18,000 final spend. Variance to base is zero; unused ceiling is USD 2,000. Figures are illustrative and include valued project labor, not vendor quotes.

Appendix B Test pilot board and handover evidence

All outcomes below are authored classroom records. Bekele prepares the technical checks; Helen performs independent review. Final simulated test date is 5 February 2027 unless stated.

ID and check	Expected	Observed in simulation
T01 Valid registration	One enrollment and correct confirmation	Pass; correct synthetic user and enrollment
T02 Invalid form	Missing required field rejected	Pass; no enrollment saved
T03 Repeat submission	Retry creates no duplicate	Fail 2 Feb; fix and retest 4 Feb: pass
T04 Student role	Student cannot open instructor page	Pass; access denied
T05 Instructor role	Assigned content only	Pass; unassigned content denied
T06 Sandbox states	Success grants test access; failure does not	Pass; no live payment activation
T07 Enrollment report	Report matches synthetic enrollment records	Pass; test counts reconcile

C-01 content checklist, 29 Jan: Modules 01-12 each have a reviewed lesson, practice activity, AI exercise and knowledge check. Chris records 12/12 complete; Tesfa Haile accepts the simulated checklist. QA-01 confirms test ownership and traceable retesting on 5 Feb.

P-01 pilot record, 9 Feb: P01-P09 complete registration and assigned-module access independently; P10 needs help finding the next action. Completion is 9/10 = 90%, above the 80% target. No real learner identities or satisfaction results are asserted.

Board snapshot at 12 Feb	Owner	Result
S1 Registration and confirmation	Bekele	Done; T01-T03 pass
S2 Role access and 12 modules	Bekele / Chris	Done; T04-T05 and C-01 pass
S3 Sandbox status and report	Bekele	Done; T06-T07 pass
S4 Pilot and support handover	Helen / Hassen	Done; P-01 and H-01 accepted
F1 Live payments	Tesfa Haile	Deferred; rejected CR-01 for current release
I-02 Navigation help text	Hassen	Operations follow-up due 19 Feb

H-01 handover, 12 Feb: Hassen rehearses role assignment, enrollment lookup, failed-confirmation recovery and issue escalation using synthetic records. He accepts the support guide and access matrix. One noncritical help-text action remains with operations; A-02 records Tesfa Haile's simulated acceptance.

Appendix C Decision and responsible AI record

CR-01 decision record, 5 Feb 2027. Requester: Tesfa Haile, simulated sponsor. Request: activate live payments. Decision: reject for the current release. A preliminary additional USD 2,500 and one-week estimate would exceed the USD 20,000 ceiling and require unassessed controls. Keep baseline A-01 and the sandbox scope. Girmay communicates the decision on the same date. T06 verifies the retained boundary.

AI record AI-01 is an authored illustration of the review process, not an actual tool execution or a real learner submission. It follows the Module 02 AI-exercise approach. No real user records or credentials appear in the prompt.

Prompt supplied to the assistant

Draft a concise charter for Student Portal Launch SPL-27. Use only these inputs: 12 modules, student and instructor roles, 4 January to 12 February 2027, USD 20,000 ceiling, Tesfa Haile as sponsor and Girmay as PM. Include registration and sandbox payment tests. Exclude live payments, accreditation and enterprise customization. Label new acceptance criteria as proposals. List missing capacity information. Do not invent signatures or approvals.

Illustrative response requiring correction

Authored example: "Launch live payments with a USD 25,000 approved budget. A full-time developer is available. Every user will complete the program." Each sentence introduces unsupported or conflicting information.

Suggestion	Human decision	Verification
Live payments	Reject; sandbox only	Compare to supplied scope and CR-01
USD 25,000 approved	Replace with USD 20,000 ceiling	Compare to source charter; no approval claim
Full-time developer	Remove; request capacity confirmation	Use separately labeled simulated assumptions
Every user completes	Replace with proposed 8/10 pilot target	Human review required before authorization
Structured charter sections	Accept as a drafting aid	Check every field against evidence

Revision prompt: Restore the supplied budget, dates and exclusions. Label the 8/10 pilot measure as a proposal. Keep capacity unresolved until the simulated planning decision records it. Return objective and scope tables with an explicit draft status.

Human review record: Girmay checks budget arithmetic, dates, exclusions and authority claims. Tesfa Haile's later simulated A-01 decision authorizes the classroom baseline; it is separate from the AI draft. Reflection: AI helped organize fields, while human review corrected fabricated scope, funding and staffing. Preserve prompt versions and reasons for accepted, changed or rejected suggestions.