Portfolio & Career Launch

Ages 16-17 | Future Pros

Collect projects and explain what you learned from them.

How to use this guide

Read each section, complete its four lab steps, then answer the questions in the online course. The online progress bar advances only after four correct answers.

Section 1: GitHub

LEARNING GOAL: GitHub. Your finished work should demonstrate: A documented, safe project repository.

EXPLAIN THE CONCEPT: A project repository can show your work and how it changed. Publish only files you have permission to share and remove secrets. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. Choose one project you made. 2. Write a README with its goal and how to try it. 3. Check every file for private details or credentials. 4. Create a shareable version with a clear project title. Finished result: A documented, safe project repository.

Understand with an example

The idea. A project repository should help a reviewer understand purpose, setup, evidence and limits. A README claim should be traceable to an artifact or test result. Never publish credentials or private project material.

Get ready. A fictional quiz repository contains source code and a README.

Worked example 1

Follow the reasoning. Write what the quiz does, allowed inputs and how to run it. Link sanitized test evidence or mark checks not run. Describe your own contribution precisely.

Worked example 2: change one thing

Compare the result. Add a claim that the quiz serves thousands of users without evidence. Remove or qualify it; a polished repository does not justify invented usage.

Try one action at a time

1. State purpose and contribution.
2. Document setup assumptions.
3. Link reviewable evidence.
4. Review privacy and unsupported claims.

A mistake to notice

Pause and check. A public repository is not automatically safe to copy or expose private materials.

Your own small challenge

Predict before trying. If you adapted a public example, what should the README distinguish?

Check your thinking

Identify the source and applicable reuse conditions, then explain what you changed.
Do not claim all inherited work as original.
Show what you know. Point, draw, demonstrate, type, speak or use your usual communication tool. A trusted adult can help without choosing your answer.
GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Apply identity security, social-engineering defense, secure coding, cloud controls, incident handling, data protection, and professional ethics. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A documented, safe project repository.

Investigate with pictures and choices

A public repository contains a private API token.
What should happen before sharing?

1. Assume private data cannot be copied
2. Follow the approved exposure response and remove private data
3. Only rename the repository

Worked reasoning

Answer: Follow the approved exposure response and remove private data. A portfolio must use sanitized material and no credentials.

Try a changed example

Create a synthetic configuration example instead of real secrets.

Picture and meaning matches

Repository: Keeps an inspectable project

Resume: States supported experience

Interview example: Explains decisions with evidence

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.

A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed.

Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Choose one project you made.
2. Write a README with its goal and how to try it.
3. Check every file for private details or credentials.
4. Create a shareable version with a clear project title.

Finished result: A documented, safe project repository.

Check your understanding

1. Which idea best describes GitHub?

A. An interview answer is clearer when it explains the task, your actions, and the result.

B. It has no purpose in this project.

C. A first resume can focus on projects, skills, school activities, and results.

D. A project repository can show your work and how it changed.

2. What is the first step in this lab?

A. Choose one project you made.

B. Create a shareable version with a clear project title.

C. Write a README with its goal and how to try it.

D. Check every file for private details or credentials.

3. What should you do after step two?

A. Choose one project you made.

B. Check every file for private details or credentials.

C. Write a README with its goal and how to try it.

D. Create a shareable version with a clear project title.

4. Which result shows that your lab is finished?

A. A skipped lab

B. A blank page with no work

C. A documented, safe project repository.

D. A copied answer without checking it

Answer review

1. D. A project repository can show your work and how it changed.

2. A. Start with: Choose one project you made.

3. B. Step three is: Check every file for private details or credentials.

4. C. The goal is: A documented, safe project repository.

Section 2: Resume

LEARNING GOAL: Resume. Your finished work should demonstrate: A one-page draft focused on evidence.

EXPLAIN THE CONCEPT: A first resume can focus on projects, skills, school activities, and results. Describe what you did accurately. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. List two projects and your specific contribution. 2. Choose three relevant skills you actually practiced. 3. Write one result for each project.

4. Ask a mentor to review clarity and accuracy. Finished result: A one-page draft focused on evidence.

Understand with an example

The idea. A resume should describe real contributions with appropriate scope and

evidence. Distinguish work completed, work assisted and work planned. Quantify outcomes only when the measurement is supported.
Get ready. Use a fictional student project that added boundary tests to a quiz scorer.

Worked example 1

Follow the reasoning. A factual bullet says Added below/equal/above threshold tests and corrected the equality case. It states action and result without inventing business impact.

Worked example 2: change one thing

Compare the result. Change it to Improved learning by 80% without a study. That claim is unsupported; retain the concrete testing result or provide suitable evidence before quantifying.

Try one action at a time

1. Identify your actual action.
2. Name the resulting behavior.
3. Check any numbers against evidence.
4. Use accurate contribution language.

A mistake to notice

Pause and check. A stronger-sounding verb is not useful if it misrepresents what you did.

Your own small challenge

Predict before trying. How should an unfinished cloud design be described?

Check your thinking

Call it a design or planned prototype and state what artifacts exist. Do not present it as a deployed production service.
Show what you know. Point, draw, demonstrate, type, speak or use your usual communication tool. A trusted adult can help without choosing your answer.
GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Apply identity security, social-engineering defense, secure coding, cloud controls, incident handling, data protection, and professional ethics. Use

pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.

REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.

PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A one-page draft focused on evidence.

Investigate with pictures and choices

A resume claims a production deployment that was only a local mock.

What should be revised?

1. Describe the actual local scope
2. Keep the stronger claim
3. Change the project color

Worked reasoning

Answer: Describe the actual local scope. Accurate claims distinguish local, mocked and deployed work.

Try a changed example

Write one outcome supported by your project evidence.

Picture and meaning matches

Repository: Keeps an inspectable project

Resume: States supported experience

Interview example: Explains decisions with evidence

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool. A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed. Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. List two projects and your specific contribution.
2. Choose three relevant skills you actually practiced.
3. Write one result for each project.
4. Ask a mentor to review clarity and accuracy.

Finished result: A one-page draft focused on evidence.

Check your understanding

1. Which idea best describes Resume?

A. An interview answer is clearer when it explains the task, your actions, and the result.

B. It has no purpose in this project.

C. A project repository can show your work and how it changed.

D. A first resume can focus on projects, skills, school activities, and results.

2. What is the first step in this lab?

A. List two projects and your specific contribution.

B. Ask a mentor to review clarity and accuracy.

C. Choose three relevant skills you actually practiced.

D. Write one result for each project.

3. What should you do after step two?

A. List two projects and your specific contribution.

B. Write one result for each project.

C. Choose three relevant skills you actually practiced.

D. Ask a mentor to review clarity and accuracy.

4. Which result shows that your lab is finished?

A. A skipped lab

B. A blank page with no work

C. A one-page draft focused on evidence.

D. A copied answer without checking it

Answer review

1. D. A first resume can focus on projects, skills, school activities, and results.
2. A. Start with: List two projects and your specific contribution.
3. B. Step three is: Write one result for each project.
4. C. The goal is: A one-page draft focused on evidence.

Section 3: Interviewing

LEARNING GOAL: Interviewing. Your finished work should demonstrate: A practiced

project story.

EXPLAIN THE CONCEPT: An interview answer is clearer when it explains the task, your actions, and the result. Practice speaking about your own work. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. Choose one project to discuss. 2. Write its problem, your action, and the outcome. 3. Practice a one-minute explanation aloud. 4. Ask someone one follow-up question and improve the answer. Finished result: A practiced project story.

Understand with an example

The idea. An interview explanation should connect the problem, your decision, evidence and lesson. Explain uncertainty honestly and separate your work from a team's overall outcome.

Get ready. Practice discussing a fictional quiz bug where exactly 5 points failed an at-least-5 rule.

Worked example 1

Follow the reasoning. Describe the requirement, boundary tests at 4/5/6, the faulty > comparison and the corrected >= rule. Explain why the equality test exposed the defect.

Worked example 2: change one thing

Compare the result. An interviewer asks about input strings, which the original project did not support. State the limit, then describe how you would define and test a new input contract.

Try one action at a time

1. State the concrete problem.
2. Explain your own action.
3. Show the relevant evidence.
4. Discuss a limitation and next test.

A mistake to notice

Pause and check. Memorized terminology cannot replace an explanation of your own decisions.

Your own small challenge

Predict before trying. If you do not know a requested tool, what is a useful response?

Check your thinking

Say what you have and have not used, relate a relevant principle and explain a reasonable way to investigate. Avoid inventing hands-on experience.

Show what you know. Point, draw, demonstrate, type, speak or use your usual communication tool. A trusted adult can help without choosing your answer.

GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.

SAFETY CHECK: Apply identity security, social-engineering defense, secure coding, cloud controls, incident handling, data protection, and professional ethics. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.

REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.

PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A practiced project story.

Investigate with pictures and choices

An interviewer asks why you chose one design.

What makes a strong answer?

1. List unexplained acronyms only
2. Say the tool made the choice
3. Explain the requirement, tradeoff and verification

Worked reasoning

Answer: Explain the requirement, tradeoff and verification. A concrete decision example connects purpose, alternatives and evidence.

Try a changed example

Practice with a drawing or communication aid before answering aloud if desired.

Picture and meaning matches

Repository: Keeps an inspectable project

Resume: States supported experience

Interview example: Explains decisions with evidence

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.

A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed.

Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Choose one project to discuss.
2. Write its problem, your action, and the outcome.
3. Practice a one-minute explanation aloud.
4. Ask someone one follow-up question and improve the answer.

Finished result: A practiced project story.

Check your understanding

1. Which idea best describes Interviewing?

A. A project repository can show your work and how it changed.

B. An interview answer is clearer when it explains the task, your actions, and the result.

C. A first resume can focus on projects, skills, school activities, and results.

D. It has no purpose in this project.

2. What is the first step in this lab?

A. Write its problem, your action, and the outcome.

B. Practice a one-minute explanation aloud.

C. Choose one project to discuss.

D. Ask someone one follow-up question and improve the answer.

3. What should you do after step two?

A. Write its problem, your action, and the outcome.

B. Ask someone one follow-up question and improve the answer.

C. Choose one project to discuss.

D. Practice a one-minute explanation aloud.

4. Which result shows that your lab is finished?

A. A practiced project story.

B. A copied answer without checking it

C. A skipped lab

D. A blank page with no work

Answer review

1. B. An interview answer is clearer when it explains the task, your actions, and the result.

2. C. Start with: Choose one project to discuss.

3. D. Step three is: Practice a one-minute explanation aloud.

4. A. The goal is: A practiced project story.

Section 4: Guided Project & Worked Examples

COURSE INVESTIGATION: Evidence is stronger than a broad claim

YOUR PRACTICE INPUT: A learner writes ’Built a secure app’ beside one screenshot. Their repository contains a permission test, an input-validation test, and a documented unresolved limitation.

WHY IT WORKS: A portfolio should connect the claim to a defined scope and inspectable evidence. A screenshot can show appearance without proving access controls.

PLAN BEFORE YOU ACT: Draw or write the starting state, the question you need to answer, and the evidence you expect to see. A paper trace is acceptable; label it as a prediction unless you actually run a test.

WORK THE CASE: Rewrite the entry as problem, role, implementation, named tests, observed results, and limitation. Remove private details before sharing.

COMPARE WITH THE EXPECTED RESULT: The project explanation is specific and reproducible, and it does not turn a small test suite into a universal security claim.

EXPLAIN YOUR REASONING: Show the connection between the supplied input, each decision, and your result. If a number, label, or observation differs, return to the first differing step rather than changing several things together.

KEEP YOUR EVIDENCE: Save the initial plan, a drawing or sanitized output, and one explanation of what the result does and does not prove. Use pointing, speech,

drawing, typing, or your usual communication method.
LEARNING GOAL: Guided Project & Worked Examples. Your finished work should demonstrate: A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.
EXPLAIN THE CONCEPT: Review the course concepts through two applied examples. Turn a vague project description into problem, role, actions, evidence, result, and learning. Review a repository/portfolio for exposed secrets, private information, unclear README, and missing evidence. Guided project: Build a sanitized technical portfolio containing selected projects, concise READMEs, screenshots/diagrams, skills evidence, resume-ready bullets, and a presentation narrative. Work with synthetic or fictional information and ask an adult for help when appropriate. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.
ORIGINAL PROJECT LAB: 1. Read both worked examples and explain the reasoning. 2. Build a sanitized technical portfolio containing selected projects, concise READMEs, screenshots/diagrams, skills evidence, resume-ready bullets, and a presentation narrative. 3. Record the steps you completed and the result you observed. 4. Compare your result to the goal and correct one issue. Finished result: A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Understand with an example

The idea. A portfolio presentation should align repository, resume and spoken explanation around the same evidence. Different formats can emphasize different details without contradicting the underlying work.
Get ready. Use the fictional threshold-fix project as the shared case.

Worked example 1

Follow the reasoning. The repository shows the requirement and tests; the resume summarizes the fix; the interview explains the decision. All three identify the same limited contribution.

Worked example 2: change one thing

Compare the result. The resume calls it a production deployment while the repository identifies a local exercise. Reconcile the claim to the verified local scope rather

than leave contradictory descriptions.

Try one action at a time

1. Choose one evidence-backed project.
2. Write its repository summary.
3. Create a matching resume bullet.
4. Practice a consistent explanation.

A mistake to notice

Pause and check. Consistency should reflect evidence, not coordinated exaggeration.

Your own small challenge

Predict before trying. What belongs in the presentation if testing was only done on paper?

Check your thinking

State that the traces are predicted and explain the implementation checks still needed. Paper reasoning can be valuable when accurately labeled.
Show what you know. Point, draw, demonstrate, type, speak or use your usual communication tool. A trusted adult can help without choosing your answer.
GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Apply identity security, social-engineering defense, secure coding, cloud controls, incident handling, data protection, and professional ethics. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Investigate with pictures and choices

A reviewer tries your setup instructions and gets a different result.

What should you inspect?

1. Whether to delete the README
2. Starting conditions, versions and missing steps
3. Only their typing speed

Worked reasoning

Answer: Starting conditions, versions and missing steps. Reproducibility requires an explicit environment and input.

Try a changed example

Ask a peer to follow the instructions without your coaching.

Picture and meaning matches

Repository: Keeps an inspectable project

Resume: States supported experience

Interview example: Explains decisions with evidence

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool. A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed. Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Read both worked examples and explain the reasoning.
2. Build a sanitized technical portfolio containing selected projects, concise READMEs, screenshots/diagrams, skills evidence, resume-ready bullets, and a presentation narrative.
3. Record the steps you completed and the result you observed.
4. Compare your result to the goal and correct one issue.

Finished result: A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Check your understanding

1. Which idea best describes Guided Project & Worked Examples?

A. A project repository can show your work and how it changed.

B. Review the course concepts through two applied examples.

C. A first resume can focus on projects, skills, school activities, and results.

D. It has no purpose in this project.

2. What is the first step in this lab?

A. Build a sanitized technical portfolio containing selected projects, concise READMEs, screenshots/diagrams, skills evidence, resume-ready bullets, and a presentation narrative.

B. Record the steps you completed and the result you observed.

C. Read both worked examples and explain the reasoning.

D. Compare your result to the goal and correct one issue.

3. What should you do after step two?

A. Build a sanitized technical portfolio containing selected projects, concise READMEs, screenshots/diagrams, skills evidence, resume-ready bullets, and a presentation narrative.

B. Compare your result to the goal and correct one issue.

C. Read both worked examples and explain the reasoning.

D. Record the steps you completed and the result you observed.

4. Which result shows that your lab is finished?

A. A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

B. A copied answer without checking it

C. A skipped lab

D. A blank page with no work

Answer review

1. B. Review the course concepts through two applied examples.

2. C. Start with: Read both worked examples and explain the reasoning.

3. D. Step three is: Record the steps you completed and the result you observed.

4. A. The goal is: A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Section 5: Independent Challenge & Mastery

INDEPENDENT TRANSFER CASE: Evidence is stronger than a broad claim

KEEP THE ORIGINAL BASELINE: A learner writes ’Built a secure app’ beside one screenshot. Their repository contains a permission test, an input-validation test,

and a documented unresolved limitation.
CHANGE ONE CONDITION: A reviewer asks whether the app handles every attack. The available tests support only their stated scenarios.
YOUR TASK: Rewrite the entry as problem, role, implementation, named tests, observed results, and limitation. Remove private details before sharing.
PREDICT, THEN CHECK: State which part of your original reasoning should remain true and which part must be recalculated or retested. Keep the original and changed results side by side.
REVIEW CRITERIA: The project explanation is specific and reproducible, and it does not turn a small test suite into a universal security claim.
MENTOR DISCUSSION: Explain why the changed condition matters. Identify a tempting wrong conclusion, show the observation that would challenge it, and choose one next test. A statement of uncertainty is better than inventing a result.
PORTFOLIO NOTE: Keep your baseline, changed input, prediction, observed or paper-traced result, explanation, and one improvement. These practice prompts do not replace the course’s existing quiz or final assessment.
LEARNING GOAL: Independent Challenge & Mastery. Your finished work should demonstrate: An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.
EXPLAIN THE CONCEPT: Apply what you learned without copying the guided solution. Independent challenge: Conduct a mock technical interview: explain one project, one failure/debugging moment, one security choice, and one tradeoff. Safety and responsibility: Remove addresses, school schedules, personal phone/email where inappropriate, credentials, customer/employer confidential data, and anything you lack permission to publish. Reflect on your work: What did you build or discover? What did you test or change after feedback? What safe or responsible choice did you make? Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.
ORIGINAL PROJECT LAB: 1. Explain the challenge and make a short plan. 2. Conduct a mock technical interview: explain one project, one failure/debugging moment, one security choice, and one tradeoff. 3. Test the result and record evidence of your work. 4. Review the safety scenario and describe one improvement. Finished result:

An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Understand with an example

The idea. A career-ready practice artifact should be understandable without private context. Review it for reproducibility, honest attribution and accessible explanation before public sharing.

Get ready. Select a fictional or sanitized project and prepare a short handoff.

Worked example 1

Follow the reasoning. Include purpose, your contribution, setup, one successful case, one failure case and a limitation. A reviewer should be able to distinguish observed results from expected ones.

Worked example 2: change one thing

Compare the result. Ask a helper to follow the setup and note the first unclear instruction. Revise that instruction and record whether the revised procedure was actually retried.

Try one action at a time

1. Select safe project material.
2. Prepare evidence and attribution.
3. Request a reproducibility review.
4. Revise and state remaining gaps.

A mistake to notice

Pause and check. Do not include personal contact details, private records or credentials in portfolio evidence.

Your own small challenge

Predict before trying. Give one improvement supported by the helper’s review.

Check your thinking

Name the unclear step, explain the revision and report the follow-up result if checked. Do not claim usability was proven from one review.

Show what you know. Point, draw, demonstrate, type, speak or use your usual communication tool. A trusted adult can help without choosing your answer.

GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Apply identity security, social-engineering defense, secure coding, cloud controls, incident handling, data protection, and professional ethics. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Investigate with pictures and choices

Your portfolio has one unresolved limitation.
What should the handoff do?
1. State it and propose a next verification step
2. Hide it from every reviewer
3. Claim the project has no risk

Worked reasoning

Answer: State it and propose a next verification step. Acknowledging a specific limit supports an honest and useful review.

Try a changed example

Separate completed evidence from planned improvements.

Picture and meaning matches

Repository: Keeps an inspectable project
Resume: States supported experience
Interview example: Explains decisions with evidence

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.
A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed. Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Explain the challenge and make a short plan.
2. Conduct a mock technical interview: explain one project, one failure/debugging moment, one security choice, and one tradeoff.
3. Test the result and record evidence of your work.
4. Review the safety scenario and describe one improvement.

Finished result: An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Check your understanding

1. Which idea best describes Independent Challenge & Mastery?

A. It has no purpose in this project.

B. A project repository can show your work and how it changed.

C. Apply what you learned without copying the guided solution.

D. A first resume can focus on projects, skills, school activities, and results.

2. What is the first step in this lab?

A. Review the safety scenario and describe one improvement.

B. Conduct a mock technical interview: explain one project, one failure/debugging moment, one security choice, and one tradeoff.

C. Test the result and record evidence of your work.

D. Explain the challenge and make a short plan.

3. What should you do after step two?

A. Test the result and record evidence of your work.

B. Conduct a mock technical interview: explain one project, one failure/debugging moment, one security choice, and one tradeoff.

C. Review the safety scenario and describe one improvement.

D. Explain the challenge and make a short plan.

4. Which result shows that your lab is finished?

A. A blank page with no work

B. An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

C. A copied answer without checking it

D. A skipped lab

Answer review

1. C. Apply what you learned without copying the guided solution.
2. D. Start with: Explain the challenge and make a short plan.
3. A. Step three is: Test the result and record evidence of your work.
4. B. The goal is: An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Mastery & safe-use plan

Ages 16-17

Digital safety: Apply identity security, social-engineering defense, secure coding, cloud controls, incident handling, data protection, and professional ethics.

AI literacy: Use AI as an accountable engineering assistant: validate outputs, protect data, document use, test security, and keep humans responsible.

Challenge: Work through a realistic ticket, incident, architecture, data, or application scenario with professional evidence.

Portfolio: Produce a career-ready artifact such as a repository, incident report, architecture diagram, dashboard, automation, or technical brief.

Mastery check: Present the work as if to a mentor or interviewer: problem, approach, evidence, tradeoffs, security, and next improvement.

Project worksheet

My project: Publish a technical portfolio

Who will use or review it? _____

My plan: _____

Checkpoint 1: A documented, safe project repository.

Checkpoint 2: A one-page draft focused on evidence.

Checkpoint 3: A practiced project story.

Checkpoint 4: A completed guided project with documented evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

Checkpoint 5: An independent demonstration with evidence: Portfolio/repository, Project README, Resume bullets, Mock-interview notes.

One thing I tested: _____

One thing I changed after testing: _____

What I learned: _____

Trusted adult or mentor feedback: _____

Family review

Show your finished work to a trusted adult. Explain one thing you learned and one thing you would improve.

Beat IT Kids | For learning at home. Do not put real passwords or private details in practice projects.