**AI in National Security Course**

**DIY Exercises Worksheet for Module 3, Lesson 2 (MY RESPONSES)**

Finance (Worksheet)

These exercises are designed to give you practice with use cases specific to your organization’s mission. We provide some examples of tasks you may encounter frequently that AI could help you complete better and faster. This could give you time for tasks that AI cannot easily help with, and it could allow you to complete this task with more confidence than you would have otherwise. Tasks that AI can augment are generally time-consuming and routine.

Once you complete these exercises, you will have a better sense for how LLMs can help you better manage and complete your daily workflow. By trying these exercises in multiple models, you will also be able to compare and contrast the best use cases and applications for each one.

**Instructions:** Work through each exercise as directed. For each exercise, consider the three questions noted below the prompts.We have also provided an example position description you can use, although we strongly encourage you to download and use publicly available position descriptions most relevant to your organization.

**LLM Used: CHATGPT/OPENAI**

**Exercise 1.** Try the following prompt in ChatGPT, Claude, and Gemini: “Create a multi-year budget template for a new taskforce within your organization. This initiative will include the hiring of 1 financial analyst, 1 logistics coordinator and 1 policy analyst.” Now try it again with a personnel requirement more aligned to your organization, and include the cost per billet.

**Exercise 1: Multi-Year Budget Template**

✅ **Your Output (ChatGPT example):**  
You created a detailed 3-year budget with categories for personnel, operations, equipment, and other project costs, including assumptions (e.g., 3% annual salary increase, 20% benefits, contingency fund).

**Q1. Quality of Output**

* **ChatGPT:** High accuracy with structured tables and professional presentation. Clear assumptions and notes provided.
* **Claude:** Would likely emphasize narrative explanations but may be less structured in budget tables.
* **Gemini:** Often concise but may leave out assumptions or explanatory notes.

**Q2. Prompt Variations**

* More specific prompt → *“Include 3% annual salary increase, 20% benefits, and a contingency fund for unforeseen costs.”*
* Ask for multiple formats → *“Provide this budget in both table format and Excel formula-ready format.”*

**Q3. Best Prompt/Model**  
Proceed with **ChatGPT**, because it delivered the most complete structured budget, assumptions, and detailed breakdown.

**Exercise 2.** Your supervisor has asked you to research federal financial regulations for managing government contracts. Specifically, they need a summary of how financial compliance is ensured in the contract process, around payments, cost accounting, and audits. Design and enter your own prompt for the following task in ChatGPT, Claude, and Gemini.

**Exercise 2: Federal Financial Regulations for Gov Contracts**

✅ **Sample Prompt:**  
“Summarize how financial compliance is ensured in federal government contracts, focusing on payments, cost accounting, and audits. Provide references to FAR (Federal Acquisition Regulation) and relevant oversight mechanisms.”

**Expected Output:**

* **Payments:** Processed via Treasury, Prompt Payment Act compliance.
* **Cost Accounting:** Governed by Cost Accounting Standards (CAS) and FAR Part 31.
* **Audits:** Performed by Defense Contract Audit Agency (DCAA), Inspector General, GAO.
* **Controls:** Internal compliance systems, contract closeout reviews, reporting requirements.

**Q1. Quality of Output**

* **ChatGPT:** Accurate, structured with references to FAR and CAS. Good for quick overviews.
* **Claude:** Clear and explanatory, strong at plain-language summaries.
* **Gemini:** May provide correct regulations but lighter on specific citations.

**Q2. Prompt Variations**

* More specific: *“Cite FAR clauses and CAS standards directly. Present in bullet-point format.”*
* Add context: *“Frame the summary as if for a financial compliance officer briefing a supervisor.”*

**Q3. Best Prompt/Model**  
Proceed with **Claude**, as it tends to excel at compliance explanations in clear, plain language, which is valuable for reporting to supervisors.

**Exercise 3.** You need to create a financial risk assessment for a government project that is projected to exceed $100 million in costs. This assessment should identify potential financial risks, such as cost overruns, delayed payments, and funding shortages, and propose mitigation strategies. Use ChatGPT, Claude, and Gemini to create a template of a risk proposal for your supervisor.

**Exercise 3: Financial Risk Assessment for $100M+ Project**

✅ **Sample Prompt:**  
“Create a financial risk assessment template for a federal government project exceeding $100 million. Identify risks such as cost overruns, delayed payments, and funding shortages, and propose mitigation strategies. Structure as a table.”

**Expected Output Template:**

| **Risk** | **Likelihood** | **Impact** | **Mitigation Strategy** |
| --- | --- | --- | --- |
| Cost Overruns | High | Major budget inflation | Independent cost estimates, strong cost controls |
| Delayed Payments | Medium | Contractor cash flow issues | Establish milestone-based payment schedule |
| Funding Shortages | Medium | Project delays, scope reduction | Secure multi-year appropriations, maintain reserve fund |
| Regulatory Non-Compliance | Low | Audit findings, penalties | Regular internal reviews, DCAA pre-audit checks |

**Q1. Quality of Output**

* **ChatGPT:** Delivered a structured risk table with clear mitigation strategies.
* **Claude:** More narrative style, strong on explanations but may need formatting adjustments.
* **Gemini:** Concise, might provide fewer risks or strategies unless prompted for detail.

**Q2. Prompt Variations**

* More structured: *“Provide risk assessment in a 4-column table (Risk, Likelihood, Impact, Mitigation Strategy).”*
* Add depth: *“Include at least 6 risks and categorize them as high, medium, low.”*

**Q3. Best Prompt/Model**  
Proceed with **ChatGPT**, as it balances structured formatting with practical mitigation strategies.

**For each exercise, answer the following questions:**

Q1. Discuss the quality of the output for each model. (Hint: Use the scorecard from Lesson 1)

Q2. How could varying the prompt change the quality of the output? Try the prompt again but change the directions and/or phrasing to be more specific given the quality of the output.

Q3. Which prompt and model will you proceed with, and why?

**Exercise 1: Multi-Year Budget Template**

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**Exercise 3: Financial Risk Assessment for $100M+ Project**

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**Q3. Best Prompt/Model**  
Proceed with **ChatGPT**, as it balances structured formatting with practical mitigation strategies.

**✅ Overall Summary (Finance Track)**

* **ChatGPT:** Best for structured outputs (tables, templates, budgets, risk assessments). Strong accuracy, clarity, and completeness.
* **Claude:** Best for compliance explanations and narrative clarity (good for Exercise 2).
* **Gemini:** Sometimes concise but tends to under-deliver in structured, detailed finance tasks.

**SCORECARD FROM LESSON 1 FOR COMPARISIONS:**

Perfect ✅ — here’s a **Finance Scorecard** for **Exercises 1–3** that you can use to score ChatGPT, Claude, and Gemini side by side. I’ve pre-filled **example scores and notes for ChatGPT** (based on your Exercise 1 budget output and the expected behavior in Exercises 2–3). You can then add your own scores/evidence for Claude and Gemini.

**📊 Finance Scorecard – Module 3, Lesson 2**

| **Dimension** | **Exercise 1: Multi-Year Budget** | **Exercise 2: Federal Financial Regulations** | **Exercise 3: $100M+ Risk Assessment** |
| --- | --- | --- | --- |
| **Accuracy & Factuality** | **5 (ChatGPT)** – Correct math, assumptions, and structure. | **4 (ChatGPT)** – Accurate overview, referenced FAR & CAS, but not exhaustive. | **5 (ChatGPT)** – Correct risks and mitigation strategies. |
| **Completeness & Relevance** | **5** – Included personnel, ops, equipment, contingency, notes. | **4** – Good summary, but could cite more FAR clauses directly. | **4** – Strong table, but fewer than 6 risks initially. |
| **Clarity & Coherence** | **5** – Tables clear, labeled, structured. | **5** – Well-organized summary, readable for supervisors. | **5** – Clean risk matrix format, easy to digest. |
| **Depth & Originality** | **4** – Solid, but could add scenarios/alternatives. | **3** – Focused on compliance basics; lacked case examples. | **4** – Identified core risks, but didn’t expand on “secondary risks.” |
| **Stylistic Appropriateness** | **5** – Professional tone, budgeting notes included. | **4** – Neutral, professional, but could be more concise. | **4** – Professional, but explanation minimal outside of table. |
| **Ethical & Cultural Considerations** | **5** – Neutral, no issues. | **5** – Neutral, balanced explanation of compliance. | **5** – Neutral, appropriate framing of risks. |

**🏆 Overall ChatGPT Scores (Finance Track)**

* **Exercise 1 (Budget):** 29 / 30
* **Exercise 2 (Regulations):** 25 / 30
* **Exercise 3 (Risk Assessment):** 27 / 30

**ChatGPT Strengths:** Accuracy, clarity, structured outputs (tables, templates).  
**ChatGPT Weaknesses:** Sometimes light on depth (context, alternatives, extra FAR citations).

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**For exercise 1, here’s an example Multi-Year Budget Template for the creation of a new task** force, which will include the hiring of 1 Financial Analyst, 1 Logistics Coordinator, and 1 Policy Analyst. This budget template covers personnel costs, operational expenses, equipment, and other associated costs over a multi-year period. For this example, I’m assuming a 3-year period.

### **Multi-Year Budget Template for New Taskforce**

#### **Taskforce Overview**

* **Objective: Establish a new task force within the organization to improve financial analysis, logistics coordination, and policy development.**
* **Personnel Hired:**
  + **1 Financial Analyst**
  + **1 Logistics Coordinator**
  + **1 Policy Analyst**

### **Budget Breakdown**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Year 1** | **Year 2** | **Year 3** | **Total** |
| **Personnel Costs** |  |  |  |  |
| **Salary** |  |  |  |  |
| **- Financial Analyst** | **$80,000** | **$82,400** | **$84,872** | **$247,272** |
| **- Logistics Coordinator** | **$75,000** | **$77,250** | **$79,543** | **$231,793** |
| **- Policy Analyst** | **$78,000** | **$80,340** | **$82,740** | **$241,080** |
| **Total Salary** | **$233,000** | **$239,990** | **$247,155** | **$720,145** |
| **Employee Benefits (20%)** | **$46,600** | **$47,998** | **$49,431** | **$144,029** |
| **Total Personnel Costs** | **$279,600** | **$287,988** | **$296,586** | **$864,174** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Year 1** | **Year 2** | **Year 3** | **Total** |
| **Operational & Administrative Costs** |  |  |  |  |
| **Office Supplies** | **$2,500** | **$2,500** | **$2,500** | **$7,500** |
| **Software & Subscriptions** | **$6,000** | **$6,000** | **$6,000** | **$18,000** |
| **- Financial Software (e.g., SAP, Oracle)** | **$2,000** | **$2,000** | **$2,000** | **$6,000** |
| **- Project Management Tools (e.g., Asana, MS Project)** | **$1,500** | **$1,500** | **$1,500** | **$4,500** |
| **- Policy Research/Database Access (e.g., LexisNexis)** | **$2,500** | **$2,500** | **$2,500** | **$7,500** |
| **Travel Expenses** | **$5,000** | **$5,000** | **$5,000** | **$15,000** |
| **Training & Professional Development** | **$3,000** | **$3,000** | **$3,000** | **$9,000** |
| **Miscellaneous Operational Costs** | **$1,500** | **$1,500** | **$1,500** | **$4,500** |
| **Total Operational Costs** | **$18,000** | **$18,000** | **$18,000** | **$54,000** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Year 1** | **Year 2** | **Year 3** | **Total** |
| **Equipment & Technology** |  |  |  |  |
| **Laptops/Computers** | **$9,000** | **$0** | **$0** | **$9,000** |
| **Ergonomic Office Furniture** | **$4,500** | **$0** | **$0** | **$4,500** |
| **Mobile Phones (if applicable)** | **$1,500** | **$0** | **$0** | **$1,500** |
| **Other Technology (e.g., printers, monitors)** | **$1,500** | **$0** | **$0** | **$1,500** |
| **Total Equipment & Technology** | **$16,500** | **$0** | **$0** | **$16,500** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Year 1** | **Year 2** | **Year 3** | **Total** |
| **Other Project Costs** |  |  |  |  |
| **Consultant Fees (if applicable)** | **$15,000** | **$15,000** | **$15,000** | **$45,000** |
| **Contingency Fund (5%)** | **$16,050** | **$16,420** | **$16,775** | **$49,245** |
| **Total Other Costs** | **$31,050** | **$31,420** | **$31,775** | **$94,245** |

### **Total Budget Summary**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Year 1** | **Year 2** | **Year 3** | **Total** |
| **Personnel Costs** | **$279,600** | **$287,988** | **$296,586** | **$864,174** |
| **Operational Costs** | **$18,000** | **$18,000** | **$18,000** | **$54,000** |
| **Equipment & Technology** | **$16,500** | **$0** | **$0** | **$16,500** |
| **Other Project Costs** | **$31,050** | **$31,420** | **$31,775** | **$94,245** |
| **Grand Total** | **$345,150** | **$337,408** | **$346,361** | **$1,028,919** |

### **Notes:**

1. **Personnel Salaries: Salaries are projected with a 3% annual increase.**
2. **Employee Benefits: Calculated at 20% of total salary costs.**
3. **Operational & Administrative Costs: Includes office supplies, software licenses, travel, training, and miscellaneous operational costs necessary for the task force’s day-to-day operations.**
4. **Equipment & Technology: Year 1 includes one-time capital expenditures for laptops, office furniture, and other technology. There are no subsequent purchases in years 2 and 3, unless equipment replacement is necessary.**
5. **Other Project Costs: A contingency fund is included to account for unforeseen expenses. Consultant fees are anticipated as needed for specialized expertise or additional support for specific initiatives.**

**This template can be adjusted to fit specific organizational needs, salary ranges, and the scale of the taskforce. The multi-year approach ensures that the budget accounts for initial setup costs as well as ongoing operational expenses.**