Organizational Risk Assessment & Heat Map Analysis

🔍 Overview
This project demonstrates a Governance, Risk, and Compliance (GRC) approach to identifying, analyzing, and visualizing organizational cybersecurity risks using a risk heat map. It follows a structured methodology using Likelihood × Impact scoring to evaluate and prioritize 14 risks.

🎯 Objectives
- Identify and categorize common cybersecurity risks
- Calculate Risk Severity Scores (Probability × Impact)
- Visualize the risks in a heat map
- Categorize risks by severity level (Negligible to Critical)
- Propose mitigation recommendations

📊 Risk Scoring Model
- **Likelihood**: Scale of 1 (Rare) to 5 (Almost Certain)
- **Impact**: Scale of 1 (Minimal) to 16 (Catastrophic)
- **Risk Score** = Likelihood × Impact

Severity Classification:
Score Range	Risk Level
1–2	Negligible
3–8	Minor
10–16	Moderate
20–32	High
40–80	Critical

📈 Heat Map Summary

Impact ↓ / Likelihood →	1	2	3	4	5
16			48%	43%	
8			14%	36%	
4		7%			
2					
1	0%				

🧾 Risk Assessment Data Table

ID	Risk Description	Likelihood (1–5)	Impact (1–16)	Risk Score	Notes
R1	Data Breaches	3	4	12	
R2	Ransomware	4	16	64	

R3	Unauthorized Network Access	4	2	8		
R4	Single Point of Failure	3	16	48		
R5	No Content Filtering	3	16	48		
R6	Weak VPN	3	16	48		
R7	Lateral Movement	3	8	24		
R8	Privilege Escalation	3	8	24		
R9	Outdated Devices	2	8	16		
R10	Stolen Cookies	4	16	64		
R11	Brute Force Attacks	3	8	24		
R12	Sensitive Data Exposed	4	16	64		
R13	Reflective XSS	3	8	24		
R14	Admin Tools Exposed to Public	2	16	32		

🛡️ Key Takeaways
- **High and Critical Risks** (Scores ≥ 20) should be prioritized for mitigation.
- **Ransomware**, **Sensitive Data Exposure**, and **Stolen Credentials** were rated **Critical**.
- Recommended controls include endpoint detection, zero trust access, and patch management.

📎 Files Included
- `Risk_Assessment_Report.md` — This write-up
- `Risk_Assessment_Report.pdf` — Formatted version
- `risk_assessment_heat_map.xlsx` — Optional Excel visual

✅ GRC Domains Covered
- Risk Management
- Governance & Compliance Reporting
- Control Recommendations