TCS HackQuest - Complete File Navigation Guide

📦 Package Contents & Daily Usage Instructions

This guide explains how to use each file in your TCS HackQuest preparation package and when to reference them during your 10-day training.

🗂️ Complete File Structure

```
TCS-HackQuest-Training-Package/
├── index.html (START HERE - Your Interactive Dashboard)
├── PDFs/
│   ├── TCS-HackQuest-Complete-Preparation-Guide.pdf
│   ├── TCS-HackQuest-Previous-Years-Solutions.pdf
│   ├── TCS-HackQuest-Mock-Challenges-Walkthrough.pdf
│   ├── TCS-HackQuest-50-Practice-Problems.pdf
│   ├── TCS-HackQuest-Phase-by-Phase-Guide.pdf
│   └── TCS-HackQuest-Questions.pdf (Reference only)
├── Templates/
│   ├── tcs_hackquest_report_template.md
│   └── tcs_hackquest_cheatsheet.md
├── Guides/
│   ├── macos_security_setup_guide.md
│   └── tcs_hackquest_10day_plan.csv
└── README.md (This file)
```

🚀 How to Start

Step 1: Open index.html

File: `index.html`
Action: Double-click to open in web browser (Chrome/Safari/Firefox)

This is your **mission control** for the entire 10-day program. It contains:

- Interactive daily task lists with checkboxes
- Progress tracking that saves automatically
- Direct links to all PDFs and practice labs
- Integrated learning materials and concepts

Step 2: Navigate to Day 1

Click on "Day 1" tab in the web app and begin with the first task.

PDF Guide - What, When, and How to Use Each File

1. TCS-HackQuest-Complete-Preparation-Guide.pdf

Purpose: Your primary learning resource covering all fundamentals

When to Use:

- **Day 1**: Pages 1-8 (CTF Basics, Environment Setup)
- **Day 2**: Pages 15-20 (Web Security fundamentals)
- **Day 3**: Pages 21-25 (Cryptography basics)
- **Day 4**: Pages 26-30 (Forensics techniques)
- **Days 5-6**: Pages 31-40 (Advanced topics)
- **Throughout**: Reference as needed for concepts

How to Use:

- Read assigned sections BEFORE starting practice tasks
- Bookmark frequently referenced pages
- Take notes on key concepts
- Don't try to memorize - understand the approach

Key Sections:

- Pages 1-8: Contest structure, scoring, categories
- Pages 9-14: Tool setup and configuration
- Pages 15-35: Category-specific deep dives
- Pages 36-40: Strategy and time management

2. TCS-HackQuest-Previous-Years-Solutions.pdf

Purpose: MOST IMPORTANT - Real TCS HackQuest challenges from Seasons 5, 7, 8

When to Use:

- **Day 1, Task 5**: Season 5, Challenges 1-4 (Pages 5-12)
- **Day 2, Task 5**: Web challenges (Pages 5-7, 13-18)
- **Day 3, Task 5**: Crypto challenges (Pages 7-8, 21-25)
- **Day 4, Task 5**: Forensics challenges (Pages 5-6, 11-12, 26-29)
- **Day 5, Task 5**: Reverse engineering (Pages 21-23)

- **Day 6, Task 5**: Network & advanced web (Pages 30-31, 24-26)
- **Day 7**: Complete walkthrough of ALL challenges
- **Day 8-9**: Quick reference for patterns

How to Use:

1. **Before solving**: Read challenge description ONLY
2. **Attempt yourself** (30 min time limit per challenge)
3. **Then read solution** - compare your approach
4. **Recreate solution** from scratch to verify understanding
5. **Write your own report** using the template

Challenge Index:

- **Season 5**: Pages 5-10 (4 challenges)
- **Season 7**: Pages 11-20 (9 challenges)
- **Season 8**: Pages 21-31 (7 challenges)

Critical: These are ACTUAL TCS questions. Master these patterns!

3. TCS-HackQuest-Mock-Challenges-Walkthrough.pdf

Purpose: 30 realistic practice challenges with detailed solutions

When to Use:

- **Day 2**: Web challenges #1, #5 (Pages 3-8)
- **Day 3**: Crypto challenges #3, #6, #7 (Pages 8-10)
- **Day 4**: Forensics challenge #2 (Pages 4-5)
- **Day 6**: Advanced web #4, #7, #8 (Pages 10-16)
- **Day 7**: Mixed challenges from all categories
- **Day 9**: Focus on challenges in your weak areas

How to Use:

- Similar to PYQ PDF: Attempt first, then read solution
- Use as warm-up before attempting real CTF platforms
- Practice report writing with these challenges
- Time yourself: Beginner (30 min), Intermediate (45 min)

Challenge Categories:

- Pages 3-8: Web Exploitation (5 challenges)
- Pages 8-10: Cryptography (5 challenges)
- Pages 11-16: Forensics & Steganography (5 challenges)

- Pages 17-20: Reverse Engineering & Binary (5 challenges)

4. TCS-HackQuest-50-Practice-Problems.pdf

Purpose: Extensive problem set with brief solutions (more problems, less detail)

When to Use:

- **Days 2-6**: Additional practice after completing daily tasks
- **Day 7**: Rapid-fire practice session
- **Day 9**: Target specific weak categories
- **As needed**: When you need more problems in a specific category

How to Use:

- Use for extra practice when you finish daily tasks early
- Focus on categories where you struggled
- Time-box attempts: 20-30 minutes per problem maximum
- Solutions are briefer - focus on approach, not memorization

Structure:

- 10 problems per major category
- Beginner to advanced difficulty mix
- Quick reference format

5. TCS-HackQuest-Phase-by-Phase-Guide.pdf

Purpose: Competition day strategy and execution plan

When to Use:

- **Day 1**: Read pages 1-5 (Overview and preparation)
- **Day 7**: Read pages 5-17 (Round 1 strategy) before mock CTF
- **Day 8**: Re-read Round 1 strategy during mock competition
- **Day 9**: Read pages 18-21 (Round 2 strategy)
- **Day 10**: Read pages 22-23 (Round 3 preparation)
- **Competition Day**: Keep open as reference!

How to Use:

- This is your BATTLE PLAN for actual competition
- Read hour-by-hour breakdown for Round 1
- Understand proctoring requirements for Round 2

- Practice explaining solutions aloud (Round 3 prep)
- Print key pages for competition day reference

Key Sections:

- Pages 1-4: Pre-competition preparation checklist
- Pages 5-17: Round 1 (6-hour online) detailed strategy
- Pages 18-21: Round 2 (proctored) special considerations
- Pages 22-23: Round 3 (in-person final) presentation tips

6. TCS-HackQuest-Questions.pdf

Purpose: Raw challenge data (Reference only - no solutions)

When to Use:

- Only for quick reference if needed
- Most content duplicated in "Previous Years Solutions" PDF
- Use Previous Years Solutions PDF instead (has answers!)

Template Files - How to Use

1. tcs_hackquest_report_template.md

Purpose: Professional report format for challenge documentation

When to Use:

- Every time you solve a challenge (from Day 1 onwards)
- Especially during Day 7 & 8 (mock competitions)
- Practice filling out completely for 3-5 challenges per day

How to Use:

1. Make a copy for each challenge: `report_challenge1.md`
2. Fill out ALL sections (no skipping!)
3. Include screenshots with timestamps
4. Document EVERY command you ran
5. Explain your thought process, not just the answer
6. Save in organized folder: `~/CTF_Reports/Day2/`

Critical Sections:

- Challenge Metadata (name, category, points)
- Approach & Methodology (step-by-step)

- Screenshots (with timestamps visible!)
- Commands/Code used
- Flag capture proof
- Remediation recommendations

2. tcs_hackquest_cheatsheet.md

Purpose: Quick command reference for competition day

When to Use:

- **Day 1-6**: Add commands you learn/use frequently
- **Day 9**: Finalize and organize
- **Day 10**: Print or save in accessible location
- **Competition Day**: Keep open in second window/monitor

How to Customize:

1. Add commands you always forget
2. Include tool-specific syntax
3. Add your personal notes and tips
4. Organize by category for quick lookup
5. Test: Can you find any command in <10 seconds?

Suggested Additions:

- Your commonly used Burp Suite workflows
- Steganography tool command chains
- SQLmap one-liners
- Hex editor shortcuts
- Custom aliases you created

Setup Files

macos_security_setup_guide.md

Purpose: Complete macOS environment configuration

When to Use:

- **Day 1, Task 1**: Follow step-by-step (2-3 hours)
- **Reference**: Anytime a tool doesn't work as expected

How to Use:

1. Follow sequentially from top to bottom
2. Test each tool after installation
3. Don't skip verification steps
4. Bookmark for troubleshooting

Contains:

- Homebrew installation
- All essential security tools
- UTM + Kali Linux setup
- Docker configuration
- VS Code extensions
- Shell configuration

tcs_hackquest_10day_plan.csv

Purpose: Spreadsheet version of 10-day plan

When to Use:

- Alternative to web app if you prefer spreadsheets
- Print for physical planning
- Share with study partners

How to Use:

- Open in Excel/Numbers/Google Sheets
- Track completion by marking cells
- Adjust timings based on your pace

Daily File Usage Workflow

Day 1: Setup & Foundations

Primary Files:

1. `macos_security_setup_guide.md` - Follow completely
2. `TCS-HackQuest-Complete-Preparation-Guide.pdf` - Pages 1-8
3. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Pages 5-12 (Season 5, challenges 1-4)

Workflow:

- Morning: Setup environment using guide
- Afternoon: Read preparation guide pages 1-8

- Evening: Study and attempt first 4 PYQ challenges

Day 2: Web Security

Primary Files:

1. `TCS-HackQuest-Complete-Preparation-Guide.pdf` - Pages 15-20
2. `TCS-HackQuest-Mock-Challenges-Walkthrough.pdf` - Pages 3-8
3. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Pages 5-7, 13-18
4. `tcs_hackquest_report_template.md` - Practice reporting

Workflow:

- Morning: Read web security theory (Prep Guide)
- Midday: Practice on DVWA and PortSwigger
- Afternoon: Solve mock challenges 1 & 5
- Evening: Recreate PYQ web challenges
- All day: Write reports for each solved challenge

Day 3: Cryptography

Primary Files:

1. `TCS-HackQuest-Complete-Preparation-Guide.pdf` - Pages 21-25
2. `TCS-HackQuest-Mock-Challenges-Walkthrough.pdf` - Pages 8-10
3. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Pages 7-8, 21-25
4. `TCS-HackQuest-50-Practice-Problems.pdf` - Crypto section

Workflow:

- Morning: Study crypto fundamentals
- Midday: Practice on CryptoHack platform
- Afternoon: Hash cracking with Hashcat
- Evening: Complete all PYQ crypto challenges

Day 4: Forensics

Primary Files:

1. `TCS-HackQuest-Complete-Preparation-Guide.pdf` - Pages 26-30
2. `TCS-HackQuest-Mock-Challenges-Walkthrough.pdf` - Pages 4-5, 11-16
3. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Pages 5-6, 11-12, 26-29

Workflow:

- Morning: Learn file analysis and steganography
- Midday: Practice with steganography tools
- Afternoon: File repair exercises
- Evening: Complete PYQ forensics challenges

Day 5: Reverse Engineering

Primary Files:

1. `TCS-HackQuest-Complete-Preparation-Guide.pdf` - Pages 31-35
2. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Pages 21-23
3. Ghidra tutorials (online)

Workflow:

- Morning: Install and learn Ghidra
- Midday: PicoCTF reverse engineering challenges
- Afternoon: Ghidra walkthrough practice
- Evening: Demolition Derby challenge

Day 6: Network & Advanced Web

Primary Files:

1. `TCS-HackQuest-Complete-Preparation-Guide.pdf` - Pages 36-40
2. `TCS-HackQuest-Mock-Challenges-Walkthrough.pdf` - Pages 10-16
3. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Pages 30-31, 24-26

Workflow:

- Morning: Wireshark and network analysis
- Midday: Advanced web exploitation (SSRF, XXE, JWT)
- Afternoon: PortSwigger advanced labs
- Evening: PYQ network challenges

Day 7: Comprehensive Challenge Day

Primary Files:

1. ALL PDF files - Quick reference
2. `tcs_hackquest_report_template.md` - Intensive use

3. `TCS-HackQuest-Previous-Years-Solutions.pdf` - Complete review

Workflow:

- Morning: Mixed web challenges (3 hours)
- Midday: Crypto + Forensics mix (3 hours)
- Afternoon: Complete ALL remaining PYQ challenges (5 hours)
- Evening: Report writing practice (2 hours)

Goal: Solve 15-20 challenges total today

Day 8: Full Mock CTF

Primary Files:

1. `TCS-HackQuest-Phase-by-Phase-Guide.pdf` - Pages 5-17
2. `tcs_hackquest_report_template.md` - Use for every challenge
3. `tcs_hackquest_cheatsheet.md` - Quick reference

Workflow:

- Pre-competition setup (30 min)
- 6-hour mock CTF competition
- Post-competition analysis (2 hours)
- Report writing (3 hours)

Critical: Simulate real competition conditions!

Day 9: Weak Areas & Speed Drills

Primary Files:

- Based on Day 8 analysis
- Focus on specific PDFs for weak categories
- `TCS-HackQuest-50-Practice-Problems.pdf` - Extra practice

Workflow:

- Morning: Targeted practice in weakest category
- Afternoon: Speed drills with common patterns
- Evening: Cheat sheet refinement

Day 10: Review & Rest

Primary Files:

1. `TCS-HackQuest-Phase-by-Phase-Guide.pdf` - Read pages 1-5, 22-23
2. `tcs_hackquest_cheatsheet.md` - Final review
3. All PDFs - Light skim only

Workflow:

- Morning: Light review (2 hours max)
- Afternoon: Tool verification and workspace setup
- Evening: Complete rest - NO STUDYING!

Learning Strategies for Maximum Retention

The 3-Pass Method for Challenge Solutions

Pass 1: Attempt Blind (30 min)

- Read challenge description only
- Attempt to solve WITHOUT looking at solution
- Document your approach
- OK to get stuck!

Pass 2: Study Solution (15 min)

- Read the provided solution
- Compare with your attempt
- Identify what you missed
- Understand the "why" behind each step

Pass 3: Recreate from Scratch (30 min)

- Close the solution PDF
- Solve challenge again using your notes
- Write a complete report
- Verify you can explain every step

The Spaced Repetition Schedule

Day X: Learn new concept
Day X+1: Practice same concept (next day)
Day X+3: Review concept (3 days later)
Day X+7: Final review (7 days later)

Example:

- Day 2: Learn SQL injection
- Day 3: Practice SQL injection again
- Day 5: Review SQL injection
- Day 9: Final SQL injection review

Active Recall Techniques

Instead of: Reading solutions passively
Do this: Close PDF, explain solution out loud to yourself

Instead of: Copying commands
Do this: Type commands from memory, verify, then check

Instead of: Highlighting PDFs
Do this: Write summary notes in your own words

File Organization Best Practices

Recommended Folder Structure

```
~/TCS_HackQuest_2025/
├── PDFs/                          (All PDF files here)
├── Reports/                       (Your challenge reports)
│   ├── Day1/
│   ├── Day2/
│   └── ...
├── Screenshots/                   (Timestamped screenshots)
│   ├── Day1/
│   └── ...
├── Tools/                         (Downloaded tools)
├── Practice_Files/                (Challenge files)
│   ├── Season5/
│   ├── Season7/
│   └── Season8/
├── Cheat_Sheets/                  (Personal notes)
│   ├── tcs_hackquest_cheatsheet.md
│   └── personal_notes.md
└── index.html                     (Open daily!)
```

Naming Conventions

Reports: `report_[day]_[challenge_name]_[timestamp].md`
Example: `report_day2_sql_injection_20251127.md`

Screenshots: `[category]_[challenge]_[timestamp].png`
Example: `web_sql_injection_20251127_1430.png`

Practice Files: `[season]_[challenge_name]/`
Example: `season5_pandemic_inhibitor/`

Progress Tracking

Daily Checklist

At end of each day:

- [ ] All tasks completed in web app (checkboxes checked)
- [ ] Reports written for all solved challenges
- [ ] Screenshots saved with timestamps
- [ ] Personal notes added to cheat sheet
- [ ] Tomorrow's PDFs bookmarked and ready
- [ ] Tools tested and functional
- [ ] Progress logged in web app

Weekly Milestones

End of Week 1 (Day 7):

- [ ] Solved 40+ challenges across all categories
- [ ] Written 15+ comprehensive reports
- [ ] Comfortable with all major tools
- [ ] Completed ALL previous year questions
- [ ] Can explain approach for any challenge category

End of Week 2 (Day 10):

- [ ] Mock CTF performance: 10+ flags in 6 hours
- [ ] Report writing under 15 minutes per challenge
- [ ] Weak areas identified and improved
- [ ] Cheat sheet finalized
- [ ] Mentally prepared and confident

Common Mistakes to Avoid

File Navigation Errors

✖ **DON'T**:

- Skip around randomly between PDFs
- Read solutions before attempting challenges
- Print all PDFs (waste of paper and overwhelming)
- Try to master everything in one PDF before moving on

✓ **DO**:

- Follow the daily plan in sequence
- Use index.html as your guide
- Reference PDFs as indicated for each task
- Attempt challenges before reading solutions
- Keep only relevant PDFs open

Time Management Errors

✖ **DON'T**:

- Spend 3 hours reading preparation guide on Day 1
- Try to memorize all commands
- Get stuck on one challenge for 2+ hours
- Skip report writing to do more challenges

✓ **DO**:

- Follow time allocations in web app
- Focus on understanding approach, not memorization
- Time-box challenge attempts (30-45 min max)
- Write reports immediately after solving

Learning Approach Errors

✖ **DON'T**:

- Just read solutions without attempting
- Copy-paste commands without understanding
- Skip "beginner" challenges as "too easy"
- Practice on random platforms without strategy

✓ **DO**:

- Always attempt first, then read solution

- Type commands manually, verify understanding
- Master fundamentals before advanced topics
- Follow platform recommendations in web app

External Resources Integration

Priority Learning Platforms (Free)

All integrated in web app with direct links:

1. **PicoCTF** - Best for beginners, educational
2. **PortSwigger Academy** - Best for web security
3. **CryptoHack** - Best for cryptography
4. **OverTheWire** - Progressive Linux challenges
5. **TryHackMe** - Guided learning rooms
6. **HackTheBox** - Realistic machines (free tier)

When to use each:

- Days 1-3: PicoCTF + PortSwigger
- Days 3-4: CryptoHack
- Days 4-6: TryHackMe + HackTheBox
- Days 7-8: CTFtime (live competitions)

Tool Documentation Bookmarks

Keep these open:

- Burp Suite: https://portswigger.net/burp/documentation
- Ghidra: https://ghidra-sre.org/CheatSheet.html
- Wireshark: https://wiki.wireshark.org/
- CyberChef: https://gchq.github.io/CyberChef/
- Hashcat: https://hashcat.net/wiki/

Help & Support Resources

When Stuck on a Challenge

Step 1: Review relevant PDF section
Step 2: Check web app "Key Concepts" for that task
Step 3: Search for challenge name + "writeup" online

Step 4: Ask in CTF Discord communities (without spoilers)
Step 5: Move on after 45 minutes, return later

Recommended Communities

- **r/securityCTF** (Reddit)
- **CTF Time Discord**
- **PicoCTF Discord**
- **HackTheBox Forums**

Etiquette: Don't ask for flags directly. Ask about approach/methodology.

✅ Pre-Competition Final Checklist

Day 10 Evening - Verify Everything:

File Access:

- [ ] All PDFs open quickly without errors
- [ ] index.html works in browser
- [ ] Cheat sheet accessible
- [ ] Report template ready

Tools Functional:

- [ ] nmap, burp-suite, ghidra, wireshark tested
- [ ] VM running smoothly
- [ ] Screenshot tools work
- [ ] Internet stable

Workspace:

- [ ] Organized folder structure
- [ ] Clean desktop
- [ ] Notifications disabled
- [ ] Second monitor ready (if available)

Mental:

- [ ] 7-8 hours sleep planned
- [ ] Nutritious meal prepared
- [ ] Calm and confident
- [ ] Trust your preparation!

Conclusion

You now have a complete roadmap for using every file in your preparation package. The key to success:

1. **Start with index.html every day**
2. **Follow the daily plan sequentially**
3. **Use PDFs as reference, not for cover-to-cover reading**
4. **Attempt challenges before reading solutions**
5. **Write reports for everything**
6. **Trust the process**

Remember: You have 115+ pages of materials, 50+ challenges, and a complete training program. Quality of practice beats quantity. Focus on understanding patterns and approaches, not memorizing answers.

Good luck! You're prepared. Go capture those flags!