

DRAGONCRYPT



SECURE. EFFICIENT. EASY TO USE

TEAM MEMBERS

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PURPOSE

As data breaches and digital threats continue to grow, DragonCrypt was designed to provide a secure, user-friendly solution for protecting sensitive files. It supports multiple encryption methods and works seamlessly across all major platforms.

KEY FEATURES

- Supports symmetric, asymmetric, and hybrid encryption
- Cross-platform: Works on Windows, macOS, and Linux
- Batch processing for multiple files
- Secure key management and PBKDF2 key derivation
- User-friendly web interface
- Integrated Google reCAPTCHA v3 and VirusTotal scanning

METHODOLOGY

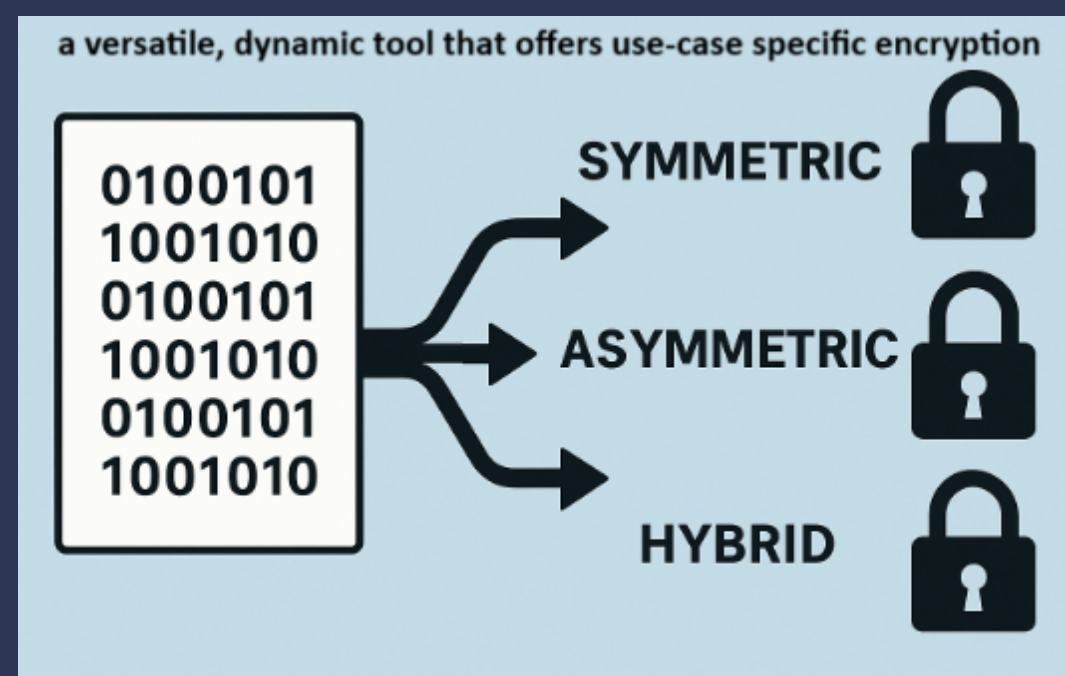
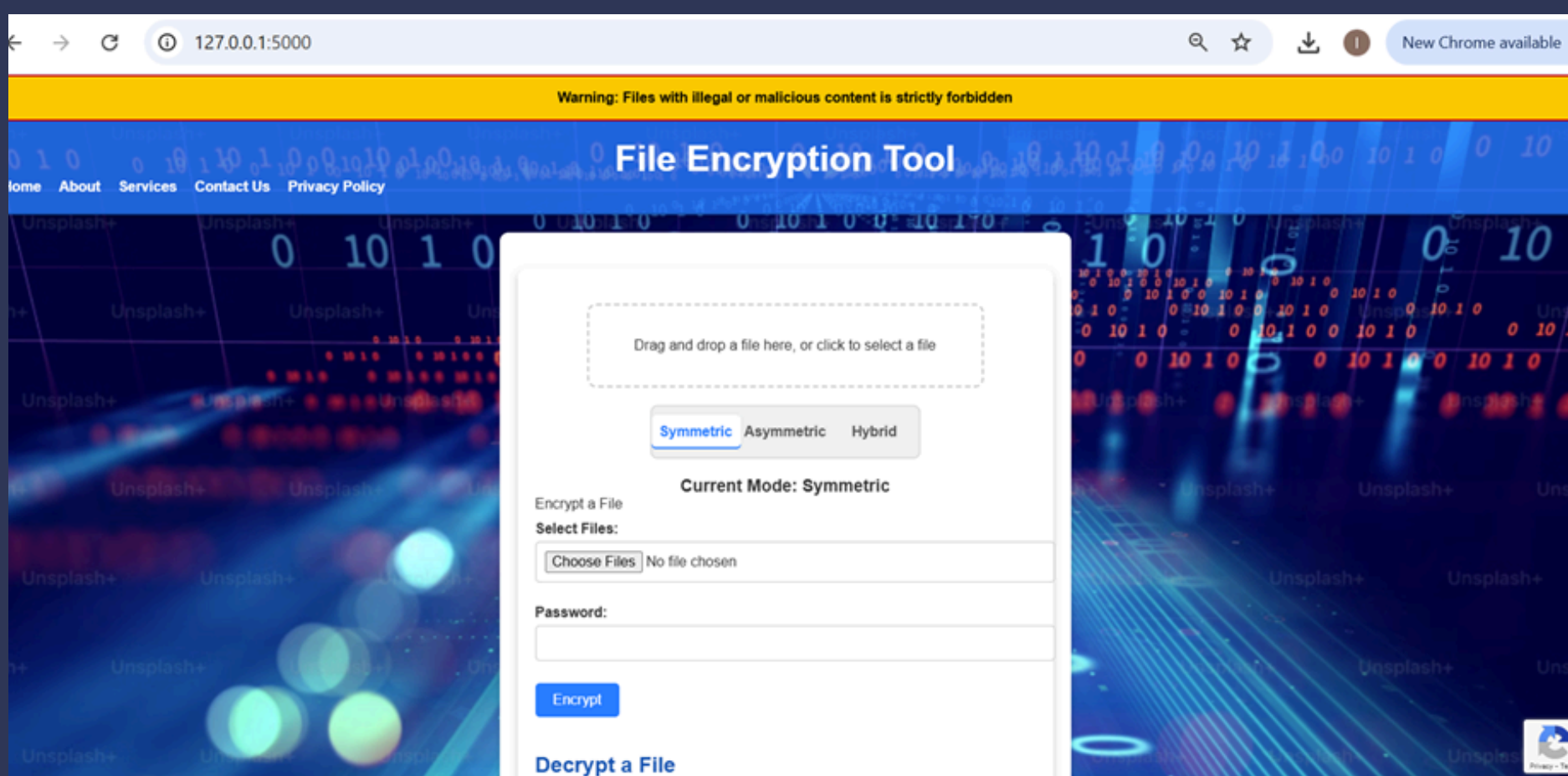
- Frontend: Built using HTML, JavaScript, and Flask templates
- Backend: Python + Flask + Cryptography library
- Security Enhancements:
 - reCAPTCHA v3 protects against bots
 - VirusTotal API scans uploaded files for malware
 - Key derivation via PBKDF2 ensures strong encryption
 - File upload validation for added protection
 - Rate limiting for DDoS protection
 - WAF
 - TLS implemented with domain name

USE CASES

- Personal & professional file protection
- Students and researchers securing sensitive data
- Healthcare file encryption (HIPAA-compliant practices possible)
- Small businesses needing fast, secure file transfers

DEVELOPMENT INSIGHTS

We followed an Agile development process, breaking tasks into weekly sprints, integrating feedback, and emphasizing testing and file validation. The project fostered not only technical growth but also real-world collaboration and planning experience.



```
127.0.0.1 - - [18/May/2025 09:56:19] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [18/May/2025 09:56:19] "GET /static/js/script.js HTTP/1.1" 304 -
127.0.0.1 - - [18/May/2025 09:56:19] "GET /static/css/style.css HTTP/1.1" 304 -
127.0.0.1 - - [18/May/2025 09:56:19] "GET /static/images/background.png HTTP/1.1" 304
127.0.0.1 - - [18/May/2025 09:56:21] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [18/May/2025 09:56:21] "GET /static/css/style.css HTTP/1.1" 304 -
127.0.0.1 - - [18/May/2025 09:56:21] "GET /static/js/script.js HTTP/1.1" 304 -
reCAPTCHA API response: {'success': True, 'challenge_ts': '2025-05-18T13:56:20Z', 'host': '127.0.0.1', 'score': 0.9, 'action': 'encrypt'}
```