Created by Colin Watson

Version WebApp-1.0-EN (Classic)

OWASP Snakes and Ladders
- Web Applications -

Snakes and Ladders is an educational application security awareness game. This version is all about web applications, with the OWASP Top Ten Proactive Controls as ladders, and the well-known OWASP Top Ten Most Critical Risks as snakes. Thank you to the leaders and other contributors of those two projects.

OWASP Top Ten Proactive Web Application Controls (2014)

The OWASP Top Ten Proactive Controls is a list of security techniques that should be included in every software development project.

C1   Parameterize Queries
C2   Encode Data
C3   Validate All Inputs
C4   Implement Appropriate Access Controls
C5   Establish Identity and Authentication Controls
C6   Protect Data and Privacy
C7   Implement Logging, Error Handling and Intrusion Detection
C8   Leverage Security Features of Frameworks and Security Libraries
C9   Include Security-Specific Requirements
C10   Design and Architect Security In

https://www.owasp.org/index.php/OWASP_Proactive_Controls

OWASP Top Ten Most Critical Web Application Risks (2013)

The OWASP Top Ten represents a broad consensus about what the most critical web application security flaws are.

A1   Injection
A2   Broken Authentication and Session Management
A3   Cross-Site Scripting (XSS)
A4   Insecure Direct Object References
A5   Security Misconfiguration
A6   Sensitive Data Exposure
A7   Missing Function Level Access Control
A8   Cross-Site Request Forgery (CSRF)
A9   Using Components with Known Vulnerabilities
A10   Unvalidated Redirects and Forwards

https://www.owasp.org/index.php/TopTen

The source file for this sheet, sheets on other application security topics, various language versions, and further information about the OWASP Snakes and Ladders project can be found on the OWASP website at https://www.owasp.org/index.php/OWASP_Snakes_and_Ladders
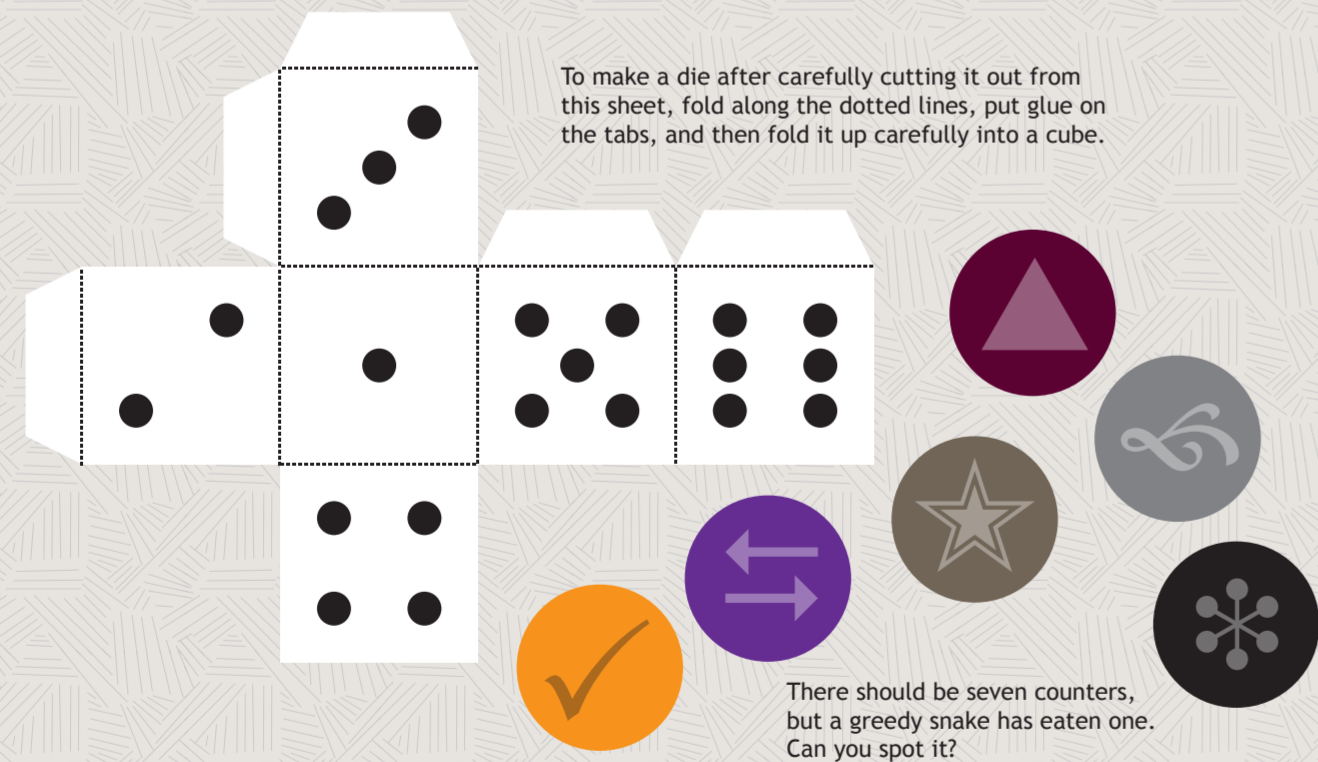
Background

Snakes and Ladders is a popular board game, imported into Great Britain by the Victorians based on a game from Asia. The original game showed the effects of good and evil, or virtues and vices. The game is known as Chutes and Ladders in some parts of the Americas. In this OWASP version, the virtuous behaviours are secure coding practices (the proactive controls) and the vices are application security risks.

Warning

OWASP Snakes and Ladders is meant to be used by software programmers, big and small. This paper game sheet is not harmful, but if you choose to use your own plastic or wooden die and counters, those might have a choking risk for children under 4 years old.

Rules

This game is for 2-6 players. Give each player a coloured counter (marker). To begin, each player should throw the die to determine who plays first; the highest can lead. Put all the player's counters onto the first square labelled "Start 1". In turn, each player rolls the die and moves their counter by the number of squares indicated on the die.

At the end of the move, if a player's counter is at the bottom end of a ladder, the counter must be moved up the ladder to the square at its higher end. Conversely, if the player's counter is located at the mouth of a snake, the counter must be moved down to the end of the snake's tail.

The first player to reach "100" at the top left wins.

No die or counters? Cut the shapes out below use the coloured circles as counters for each player. Alternatively write a computer program to simulate a six-sided die, or use a random number generator app on your phone or computer to create integers between 1 and 6. Check how random it is though!

To make a die after carefully cutting it out from this sheet, fold along the dotted lines, put glue on the tabs, and then fold it up carefully into a cube.

There should be seven counters, but a greedy snake has eaten one. Can you spot it?

Project Leader

Colin Watson

Translators / Other Contributors

Manuel Lopez Arredondo, Fabio Cerullo, Tobias Gondrom, Martin Haslinger, Riotaro Okada, Ferdinand Vroom, Ivy Zhang

Game Board

Finish

100 99 98 97 OWASP-A1 Injection 96 95 94 93 OWASP-A9 Using Components with Known Vulnerabilities 92 91

OWASP-A10 Unvalidated Redirects and Forwards
OWASP-A6 Sensitive Data Exposure
OWASP-A5 Security Misconfiguration

81 82 83 84 85 86 87 88 89 90

OWASP-A8 Cross-Site Request Forgery (CSRF)

80 79 78 77 76 75 74 73 72 71

OWASP-A4 Insecure Direct Object References
OWASP-C10 Design and Architect Security In

61 62 63 64 65 66 67 68 69 70

OWASP-C9 Include Security-Specific Requirements

60 59 58 57 56 55 54 53 52 51

OWASP-C8 Leverage Security Features of Frameworks and Security Libraries

41 42 43 44 45 46 47 48 49 50

OWASP-A7 Missing Function Level Access Control
OWASP-C7 Implement Logging, Error Handling and Intrusion Detection
OWASP-A2 Broken Authentication and Session Management
OWASP-C6 Protect Data and Privacy

40 39 38 37 36 35 34 33 32 31

OWASP-A3 Cross-Site Scripting (XSS)
OWASP-C5 Establish Identity and Authentication Controls

21 22 23 24 25 26 27 28 29 30

OWASP-C4 Implement Appropriate Access Controls
OWASP-C3 Validate All Inputs

20 19 18 17 16 15 14 13 12 11

Start

1 2 3 4 5 6 7 8 9 10

OWASP-C1 Parameterize Queries
OWASP-C2 Encode Data