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Programming Language Concepts

Course: MSc Computer Science

Module: Secure Software Development (Computer Science)

Assignment: ePortfolio

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What is ReDOS and what part does 'Evil Regex' play?

ReDOS (Regular expression Denial of Service) is a form of attack that exploits a vulnerable, open-ended regex query – causing the application to slow down when excessive inputs are provided. Evil Regex is the terminology commonly used to name a ReDos vulnerable expression.

What are the common problems associated with the use of Regex?

Some of the most common issues with the use of regex are the following:

- Difficult to read and maintain due to the complex structure.
- Different languages have different syntax and can interpret regular expressions slightly differently, for example, the PCRE and PHP implementations both have some fairly major differences.

How and why could Regex be used as part of a security solution?

Regex can be used within the security element of a solution, as it allows the system to evaluate whether a given user input matches a set of predefined regex criteria. For example, a correctly crafted Regular Expression could validate whether the user has provided a valid UK phone number.