



Welcome to this session: Software Development Life Cycle and Cyber Threats

The session will start shortly...

Questions? Drop them in the chat.
We'll have dedicated moderators
answering questions.





What is Safeguarding?

Safeguarding refers to actions and measures aimed at protecting the human rights of adults, particularly vulnerable individuals, from abuse, neglect, and harm.



To report a safeguarding concern reach out to us via email:
safeguarding@hyperiondev.com

Live Lecture Housekeeping:

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
- No question is daft or silly - ask them!
- For all non-academic questions, please submit a query:
www.hyperiondev.com/support
- To report a safeguarding concern reach out to us via email:
safeguarding@hyperiondev.com
- If you are hearing impaired, please kindly use your computer's function through Google chrome to enable captions.



Lecture Overview

- Software development lifecycle
- Cyber threats



Learning Outcomes

- ❖ Define the Software Development Lifecycle (SDLC).
- ❖ Explain the purpose of each of the 7 steps in SDLC.
- ❖ Apply basic examples to demonstrate an understanding of the steps.
- ❖ Understand the concept of cyber threats and their significance.
- ❖ Identify different types of cyber threats.
- ❖ Learn basic strategies to mitigate cyber threats.



SDLC

Have you heard of the term "Software Development Lifecycle" before?



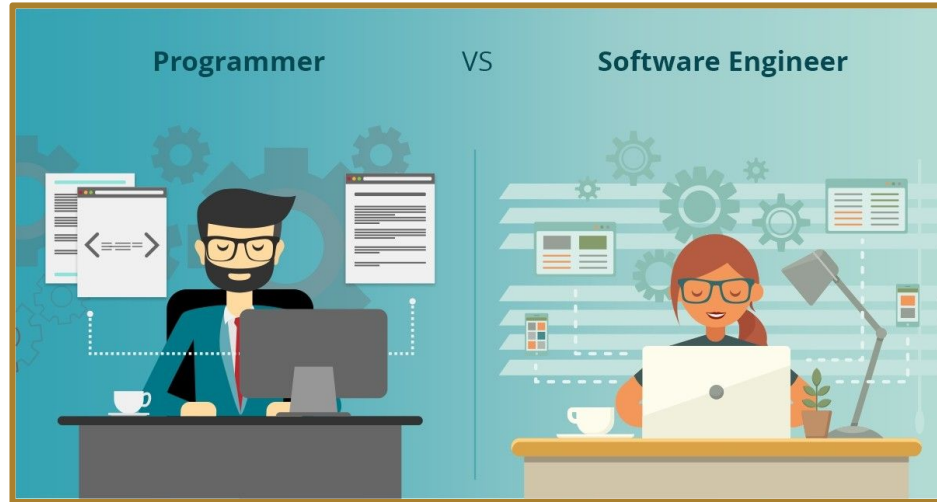
SDLC

Which of the following do you think is a part of SDLC? (Planning, Debugging, Testing, Designing)



SDLC

What is the difference between software engineering and programming?



SDLC

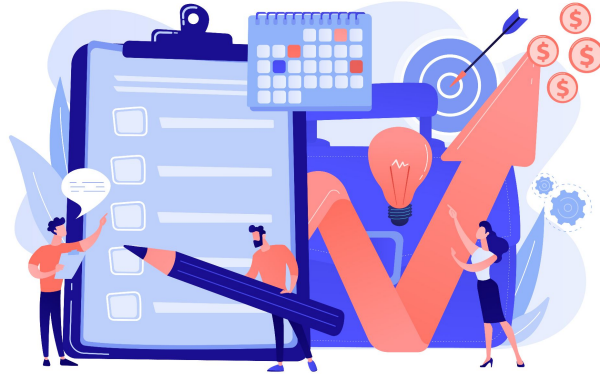
What is the software development life cycle?

- Structured process for designing, building, and maintaining software.
- Goal is to create high-quality software that meets customer needs while minimizing risk and costs.
- 7 Steps of SDLC
 - Planning
 - Requirements Analysis
 - System Design
 - Implementation (Coding)
 - Testing
 - Deployment
 - Maintenance

SDLC Steps

Planning

- Define objectives, scope, and resources.
- Example: Developing a project timeline for a mobile app.



SDLC Steps

Requirements Analysis

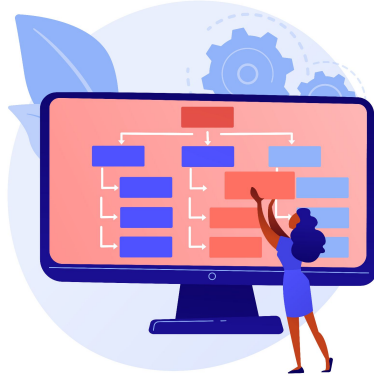
- Gather and analyze user needs.
- Example: Interviewing stakeholders to identify key app features.



SDLC Steps

System Design

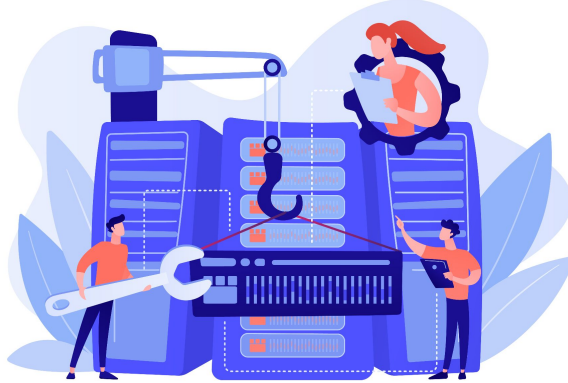
- Create architectural and detailed designs.
- Example: Designing the user interface and database schema.



SDLC Steps

Implementation

- Write the code according to the design.
- Example: Using Python to develop the backend of the app.



SDLC Steps

Testing

- Validate functionality, performance, and security.
- Example: Running unit tests and user acceptance tests.



SDLC Steps

Deployment

- Release the software to the production environment.
- Example: Deploying a web application to a cloud platform.



SDLC Steps

Maintenance

- Address bugs, updates, and user feedback post-deployment.
- Example: Fixing a reported login issue in the app.





Let's take a break

Cyber Threats

Have you ever experienced or heard of a cyberattack?



[illegible]

What do you think is the most common type of cyber threat?
(Phishing, Malware, Denial of Service, Ransomware)



Cyber Threats

- Harmful activity committed with the intent of destroying, stealing, or disrupting data, critical systems, and digital life.
- Motivation behind cyber attacks:
 - Financial gain
 - Espionage
 - Activism, etc.

Types of Threats

Phishing

- A type of social engineering attack used to steal user data, such as login credentials and banking details.

From: authenticationmail@trust.wiki-media2.com
To: johnsmith@email.com
Subject: **A new login to your Wikipedia account**



WIKIPEDIA
The Free Encyclopedia

Dear user,

There has been a recent login to your Wikipedia account from a new device:

IP address: 192.168.0.1

Location: Newville, Anyland

432 new edits have been made with this account since your last login.

If this was not you, please reset your password immediately with this link:

<https://trust.wiki-media2.com/reset-password>

Thank you,

Wikipedia Foundation

Types of Threats

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Wikipedia Foundation

Types of Threats

Malware

- Malicious software used to disrupt, damage, or gain unauthorized access to a system.
- Types
 - Viruses
 - Worms
 - Trojans
 - Bots



Types of Threats

Denial of Service (DoS) and Distributed Denial of Service (DDoS)

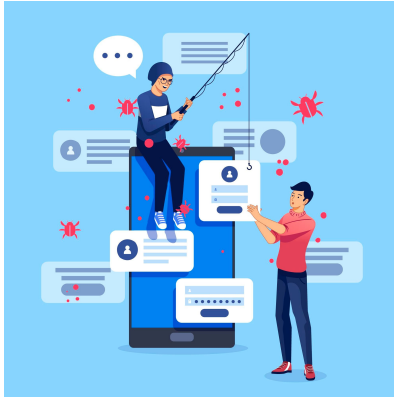
- Attempts to overload a website or network
- Degrades its performance sometimes making it completely inaccessible



Types of Threats

Social Engineering

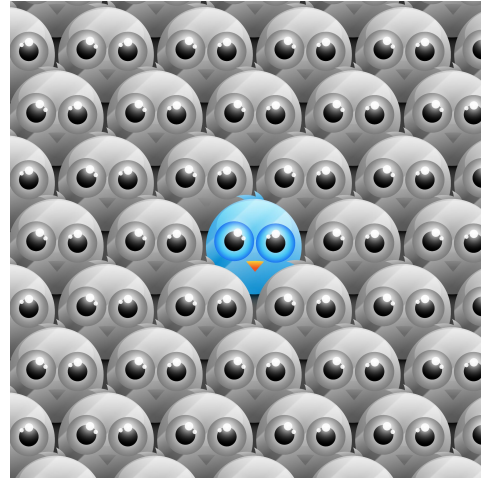
- Uses manipulation tactics to get vulnerable users to provide sensitive information to a malicious actor.
- Phishing is a subset of social engineering.



Types of Threats

Insider Threats

- Threats that exist within the inner working of an organization.
 - Current or former employees
 - Contractors
 - Associates



Threat Mitigation

- Use strong passwords and multi-factor authentication.
- Keep software and systems updated.
- Recognise and avoid suspicious links/emails.
- Backup data regularly.
- Use antivirus software and firewalls.



Polls

Please have a look at the poll notification and select an option.

Which step in SDLC involves defining the objectives and scope of the project?

- A. Implementation
- B. Requirements Analysis
- C. Planning
- D. Maintenance

Polls

Please have a look at the poll notification and select an option.

What is the main goal of the testing phase in SDLC?

- A. Deploy the software to production
- B. Ensure the software functions as intended
- C. Create a system design blueprint
- D. Fix bugs post-release

Polls

Please have a look at the poll notification and select an option.

Which of the following is NOT a phase of SDLC?

- A. Deployment
- B. Debugging
- C. Testing
- D. Maintenance

Polls

Please have a look at the poll notification and select an option.

Which cyber threat do you now feel most confident identifying?

- A. Phishing
- B. Malware
- C. DDoS

Polls

Please have a look at the poll notification and select an option.

What is the primary goal of a phishing attack?

- A. To install hardware on the victim's device
- B. To gain sensitive information like passwords or credit card details
- C. To create fake websites for no purpose
- D. To slow down the victim's computer

Polls

Please have a look at the poll notification and select an option.

What is the best way to protect against ransomware?

- A. Ignoring suspicious emails
- B. Regularly backing up important data
- C. Using public Wi-Fi
- D. Installing ad blockers

Q & A SECTION

**Please use this time to ask
any questions relating to the
topic, should you have any.**

**Thank you
for attending**



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