

SOFTWARE DEVELOPMENT LIFE CYCLE (SDLC) FOR STOCKXS – STOCK BROKERS BACKOFFICE

1. Requirement Gathering and Analysis

Objective: Understand the client's business needs and regulatory requirements.

Activities:

- Conduct workshops with stakeholders (brokers, compliance officers, etc.).
- Document functional and nonfunctional requirements.
- Identify PSX regulatory requirements (e.g., SECP guidelines, PSX rules).
- Perform a feasibility study (technical, operational, and financial).

Deliverables:

- Business Requirements Document (BRD).
- Regulatory compliance checklist.

2. Planning

Objective: Define the project scope, timeline, and resources.

Activities:

- Create a project plan with milestones and deliverables.
- Allocate resources (developers, testers, compliance experts).
- Define risk management strategies.
- Obtain client approval on the project plan.

Deliverables:

- Project Plan.
- Risk Management Plan.

3. Design

Objective: Create a blueprint for the software solution.

Activities:

- Design system architecture (e.g., micro services, monolithic).
- Create UI/UX designs for user-friendly interfaces.
- Develop a database schema and data flow diagrams.
- Ensure compliance with PSX and SECP regulations.

Deliverables:

- System Design Document (SDD).
- UI/UX prototypes.
- Compliance audit report.



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4. Development

Objective: Build the software according to the design.

Activities:

- Write clean, maintainable, and secure code.
- Integrate APIs for PSX trading systems and other required modules.
- Implement regulatory features (e.g., audit trails, reporting modules).
- Conduct code reviews and static code analysis.

Deliverables:

- Source code.
- Technical documentation.

5. Testing

Objective: Ensure the software is bug free and compliant.

Activities:

- Perform unit testing, integration testing, and system testing.
- Conduct user acceptance testing (UAT) with the client.
- Test for compliance with PSX and SECP regulations.
- Perform security testing (e.g., penetration testing, vulnerability scanning).

Deliverables:

- Test cases and test reports.
- UAT signoff from the client.

6. Deployment

Objective: Release the software to the production environment.

Activities:

- Deploy the software on the client's infrastructure or cloud.
- Configure PSX trading system integrations.
- Conduct a final compliance check.
- Provide training to end-users (brokers, compliance officers, etc.).

Deliverables:

- Deployed software.
- Training materials and sessions.



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7. Maintenance and Support

Objective: Ensure the software remains functional and compliant.

Activities:

- Provide ongoing technical support and bug fixes.
- Monitor system performance and security.
- Update the software to comply with new PSX/SECP regulations.
- Offer periodic training and system enhancements.

Deliverables:

- Support tickets and resolutions.
- Compliance updates.
- System enhancement reports.

KEY CONSIDERATIONS FOR PSX BROKERS

1. Regulatory Compliance:

- Ensure the software adheres to PSX and SECP regulations.
- Implement features like audit trails, real-time reporting, and data encryption.

2. Security:

- Use secure coding practices and conduct regular security audits.
- Protect sensitive client and trading data.

3. Scalability:

- Design the system to handle high trading volumes during peak hours.

4. User Training:

- Provide comprehensive training to brokers and compliance officers.

5. Continuous Improvement:

- Regularly update the software to meet changing market and regulatory needs.

BENEFITS OF SDLC OFFERING

Transparency: Clients can track progress at every stage.

Quality Assurance: Rigorous testing ensures a reliable product.

Compliance: Reduces the risk of regulatory penalties.

Client Involvement: Regular feedback loops ensure the software meets their needs.