

Report On  
Software Development & Operation Life Cycle and Project  
Management Perspective

By

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19164016

An internship report submitted to the Department of BRAC Business School in partial fulfillment  
of the requirements for the degree of  
Masters of Business Administration

BRAC Business School  
BRAC University  
February,2022

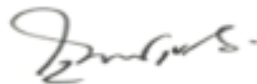
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## Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

**Student's Full Name & Signature:**



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**Md Istiakul Islam**  
19164016

**Supervisor's Full Name & Signature:**



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**Syed M Rahman, PhD**  
Associate Professor  
BRAC Business School | BRAC University



Inspiring Excellence

## **Internship Report On**

### **Software Development & Operation Life Cycle and Project Management Perspective**



**ERA**  
INFOTECH LTD

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Course: BUS699

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# Letter of Transmittal

February 26, 2022

To,  
Syed Mahbubur Rahman  
Associate Professor, BRAC Business School,  
BRAC University, 66, Mohakhali, Dhaka.

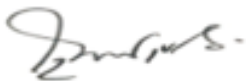
## **Subject: Submission of Internship Report.**

Dear Sir,

With due respect and great pleasure, I am presenting my internship report for three months at ERA InfoTech Ltd. The study has sparked my interest and provided me with valuable information. It gives me great pleasure to present you with this report based on my internship experience. In this report, I discuss my internship at ERA, as well as an overview of the company and its activities, my experiences working for a reputable firm, what I learned, and how it has aided me in developing banking and non-banking applications software by practicing project management in the software development life cycle.

Your approval and appreciation will surely motivate me. If you have any additional questions concerning the report, I will be happy to clarify the overall information we used here.

Yours obediently,



Md Istiakul Islam  
ID: 19164016  
MBA, BRAC University



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Signature of Supervisor

# Acknowledgment

First, I want to express my gratitude to the Almighty for his mercy and showers of blessings throughout my work to complete the internship report successfully.

I express great heartfelt thanks to, Syed Mahbubur Rahman, Associate Professor, from BRAC Business School for guiding me through the internship process at ERA InfoTech Ltd. With his expert advice and critical suggestions, he encouraged enthusiasm. I would not be able to finish the report on time without his helpful assistance and advice. I'll be eternally thankful to him for his assistance throughout the process.

I'd want to express my gratitude to Mr. Maruf Parvez Khan, AGM & Head of Fintech Solutions, for his patience and assistance during my internship. Throughout my stay at ERA InfoTech Ltd, Mr. Arifur Rahman, Head of Banking Operations, and Mr. AHM Pervej Kabir, Head of Operations, General, have provided me with a good environment and facilities in which to complete my projects.

I owe a debt of gratitude to my coworkers and peers for their assistance. They have made my internship extremely enjoyable, and it would be hard to accomplish the responsibilities properly without them. I am grateful to the entire ERA staff for making this process as painless as possible.

# Executive Summary

An internship is a chance for potential employees, referred to as "interns," to work at a company for a set, restricted amount of time. Interns are typically undergraduates or students, and most internships last anywhere from one to twelve months. The internship has a number of advantages, including educating students about the sector and job procedures.

I had to do a three-month internship program in a reputable software business during my final semester of Master of Business Administration at BRAC University. ERA InfoTech Ltd was my internship company. ERA is one of the country's largest software companies, offering a wide range of products and services to a diverse client base. ERA has a strong reputation both national and international.

At my internship, I worked on a project for United Commercial Bank Ltd called "Agent Banking Solution." During my internship, I learned how to plan and manage a project using the software development life cycle, as well as how to provide higher-quality goods and provide better support. Furthermore, I have studied good office behavior and have acquired many soft skills such as responsibility, punctuality, respect for others, taking on new challenges, and so on.

My time at ERA has been fantastic, and the internship program has been tremendously beneficial to both my academic pursuits and future profession.

## Table of Contents

<b>Chapter 1: Introduction</b> .....	9
<b>1.1 Overview</b> .....	9
<b>1.2 Objective</b> .....	9
<b>1.3 Methodology</b> .....	10
<b>1.3.1 Primary Data Source</b> .....	10
<b>1.3.2 Secondary Data Source</b> .....	10
<b>1.4 Scope</b> .....	10
<b>1.5 Limitations</b> .....	10
<b>1.6 Conclusion</b> .....	11
<b>Chapter 2: Organization Overview</b> .....	12
<b>2.1 Mission</b> .....	13
<b>2.2 Vision</b> .....	13
<b>2.3 Divisions and Department</b> .....	14
<b>2.4 Clients</b> .....	15
<b>2.5 Partners</b> .....	15
<b>2.6 Products</b> .....	16
<b>2.7 Expertise/Tools/Technologies</b> .....	19
<b>2.8 Rules &amp; Regulations</b> .....	19
<b>2.9 Conclusion:</b> .....	21
<b>Chapter 3: My Internship at ERA InfoTech Ltd.</b> .....	22
<b>3.1 Internship Experience</b> .....	22
<b>3.1.1 ERA InfoTech Ltd.</b> .....	22
<b>3.1.2 Recruitment</b> .....	23
<b>3.1.3 Facilities Given to Interns</b> .....	23
<b>3.1.4 Evaluation Process</b> .....	23
<b>3.1.5 Personal Expectations</b> .....	23
<b>3.2 Conclusion</b> .....	24
<b>Chapter 4: Software Development Life Cycle &amp; Project Management Perspective</b> .....	25

<b>4.1</b>	<b>Software / System Development Life Cycle (SDLC)</b> .....	25
<b>4.2</b>	<b>Project management</b> .....	30
<b>4.3</b>	<b>Software Development and Operation Life Cycle at ERA</b> .....	30
<b>4.3.1</b>	<b>Initiation</b> .....	31
<b>4.3.2</b>	<b>Planning</b> .....	32
<b>4.3.3</b>	<b>Execution</b> .....	32
<b>4.3.4</b>	<b>Monitoring and Controlling</b> .....	33
<b>4.3.5</b>	<b>Closing Phase</b> .....	33
<b>4.4</b>	<b>My Task During Internship Period</b> .....	34
	<b><i>Chapter 5: Recommendation and Conclusion</i></b> .....	36
<b>5.1</b>	<b>Recommendation</b> .....	36
<b>5.2</b>	<b>Conclusion</b> .....	37
	<b>References</b> .....	38



# ***Chapter 1: Introduction***

## **1.1 Overview**

An internship is a program that improves graduates' abilities and gives them the opportunity to undertake practical work in a company to get experience. Since the job market is extremely competitive, an internship provides a terrific opportunity for a student to get a kickstart.

As a graduate business administration student at BRAC University's Graduate School of Management, we must complete an internship period at a company where we will be trained in working environment practices and become familiar with the industry. I have completed my three-month internship at ERA InfoTech Ltd., a software development company.

Throughout this report, I've described my internship at ERA, an overview of the organization, my experiences working in that reputable institution, what I've learned and how that's enabled me to develop and improve client satisfaction via services and goods, and how project management role is used in software development.

## **1.2 Objective**

The report's major goal is to analyze the software development cycle and project management function in the software development life cycle along with the operation and business process of ERA InfoTech Ltd

## **1.3 Methodology**

The report's information was gathered from both internal and external sources. The following are the primary and secondary data sources for this report:

### ***1.3.1 Primary Data Source***

- Through observation and personal experience
- In conversations with coworkers

### ***1.3.2 Secondary Data Source***

- Company website
- Related office documents
- Web

## **1.4 Scope**

I've talked about the organization, its products and services, the workplace structure and culture, and its procedures in this document. The second part of the report discusses how I started the internship at ERA and the work activities I completed during that time. The document's third section discusses Software Development and how to employ project management in the Software Development Life Cycle.

## **1.5 Limitations**

To start with, I am unable to share certain financial information that is critical to the company owing to the nature of the contract and the confidential agreement I had to

sign when I joined ERA. Furthermore, a variety of obstacles, such as time and resources, have hampered my productivity. Nonetheless, I made every effort to convey all of the facts in the most effective manner possible.

## **1.6 Conclusion**

During our time as interns, we get the opportunity to learn from and network with a wide range of industry professionals and notable figures. An overview of the organization, my professional experience, my involvement and contributions, as well as my self-evaluation of my performance throughout the internship period are all covered in this report

## ***Chapter 2: Organization Overview***

As part of a joint venture between Bank Asia Ltd, Ranks ITT Limited of Bangladesh, and Sash Tech SG Pte. Ltd, Singapore, ERA InfoTech Ltd was founded. On November 11th, 2002, ERA began its voyage. Agent Banking, Loan Originating & Approval System, HR & Payroll Management Solution, ERP Micro Finance Solution, Mobile and System Critical Software have all been developed by ERA for a wide range of clients including financial institutions as well as multinational corporations and the government. There is a large staff of internationally acknowledged software experts with skills in Oracle, Microsoft and other programming languages at ERA. Software solutions like Agent Banking, for example, were developed by ERA first in the country. When it comes to IT solutions for the government, ERA's diverse skill sets have been put to the test with Ektee Bari Ektee Khamar (EBEK).

ISO-9001:2015 (ISO Information Security Management System), ISO-27001:2013 (Information Security Management System), and CMMI Dev. Level 3 certifications have been granted to the organization. ERA is a member of the Bangladesh Association for Software and Information Services, where it is actively involved.

Bangladesh's National Productivity Organization (NPO) awarded ERA the National Productivity & Quality Greatness Award in 2015, which recognizes the company's efforts to improve productivity and quality. In 2013, ERA receive Manthan Award for Business and Financial Inclusion recognized by BID, Paris, France, in the category of International Leadership in Quality. ERA is committed to offering its consumers with high-quality products and services.

## 2.1 Mission

ERA-InfoTech Limited was founded in 2002 with the goal of being the country's premier IT solutions and services provider. ERA has a skilled team of professionals that are constantly utilizing cutting-edge technologies to create value for the community and assure a reasonable return to stakeholders. Its objective is to provide integrated and innovative solutions to clients by creating and building the most efficient software and applications in an ethical manner, based on innovation, professionalism, and enhanced productivity.

- \* Through the excellence of its products, ERA aim to achieve maximum customer satisfaction over the full life cycle of a solution.
- \* Improve competitiveness and generate revenue growth on a consistent basis.
- \* To uphold strong corporate governance while remaining financially stable.
- \* To participate in nation-building and assist in the Country's economic development.
- \* Encourage innovations, skills, and value systems for becoming the preferred client's choice.
- \* To gain all consumers' trust and confidence by exceeding their expectations.
- \* In all parts of relationships and dealings, uphold the core principles of trust, integrity, and transparency.

## 2.2 Vision

People's use of technology in their daily lives should be redesigned in enabling communities for the betterment of society.

## 2.3 Divisions and Department

ERA is among the country's largest IT companies. The company is divided into seven sections based on two sides to maintain its diverse activities. Each division has its departments, and each department has its own set of teams. These divisions are as follows:

- Business & Planning
- Marketing & Sales
- HR & Admin
- Accounts & Finance
- Development
- SQA & Testing
- Software Operations

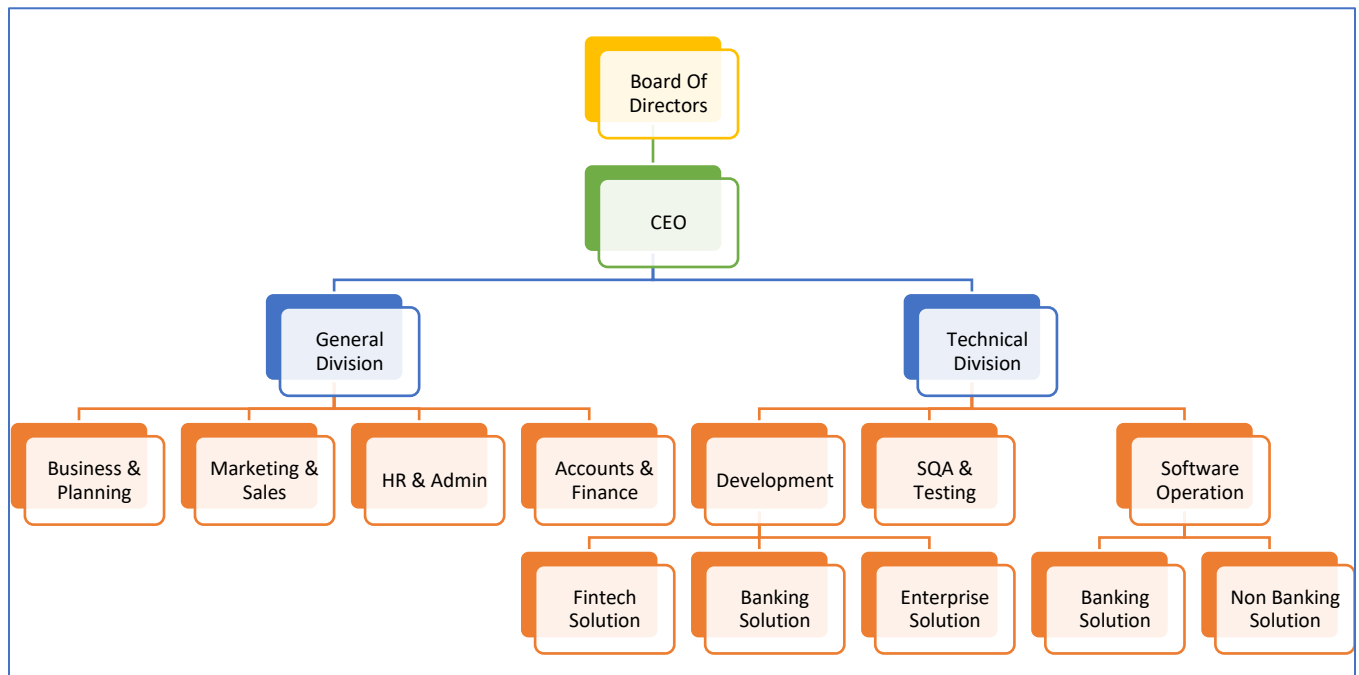


Figure: Organogram of ERA InfoTech Ltd.

## 2.4 Clients

ERA has been serving many financial organizations and corporate houses in both private and public sectors for the last 19 years towards their digital future. Currently, they have around 250+ installations and more than 50+ clients are using ERA's solution. Some of the major clients of ERA InfoTech Ltd. are Bank Asia Ltd., United Commercial Bank Ltd., Polli Sonchoy Bank Ltd., Sonali Bank Ltd, BCBL, BDBL, Sea Resources Ltd., Rangs Motors Ltd., GPH Ispat Ltd., and so on.



Figure: Some of ERA's Valued Clients

## 2.5 Partners

ERA has made partnerships/collaborations with some local and international organizations to expand its business. Some of its partners are – ORACLE, intellect, Mobility One, etc.

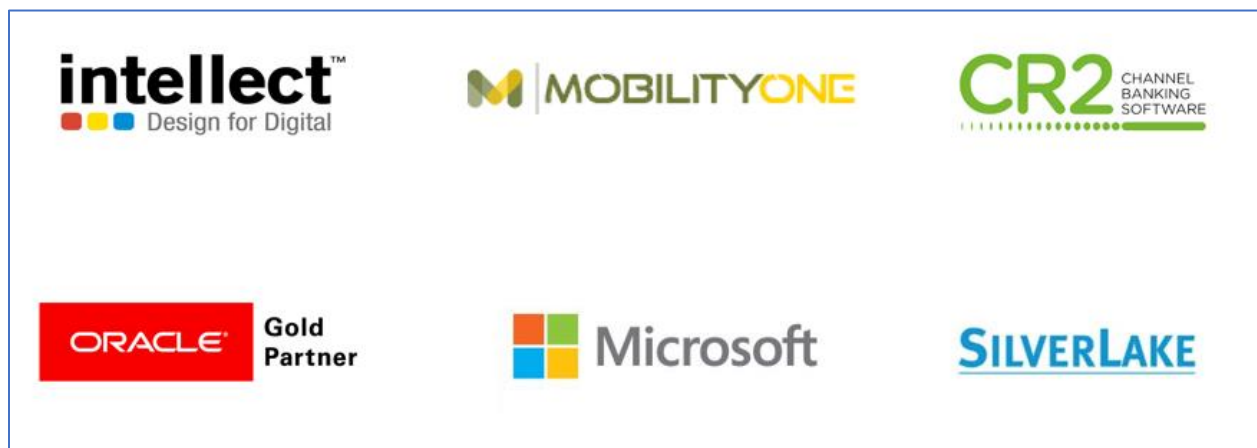


Figure: Partners of ERA

## 2.6 Products

For its clients, ERA has developed a number of products, as well as provided support for the developed systems and IT services. Products are categorized into Fintech Solutions, Banking Solutions, and Enterprise Solutions. Some of ERA's key products are –

**iStelar:** iStelar is a robust and comprehensive real-time core banking system with all of the essential features and functionalities that any large, medium or small bank would require. Its customer-centric approach allows the bank to effectively serve customers. iStelar integrates a wide range of bank business functionalities, from teller operations to treasury and ADCs, with scalability in a safe method to suit today's and tomorrow's business challenges and needs. Its component-based modular architecture allows banks to embrace new technology, products, and services in less time and with ease, and it integrates with any solution. Software is accessible at all times and from any location in the world on any device with an internet connection and in real time, online.. iStelar is the



product of continuous research and development to bring a broad range of banking operations and solutions.

**Orbits:** Orbits is a full-service business solution for small, medium, and large businesses. A core set of resource management modules encompassing financials, human resources, and inventory management works in tandem with a number of front-office operating modules to give an idle solution that can be up and running quickly. Its modular architecture makes it simple to add new modules for horizontal and vertical functionality expansions for business process re-engineering. Orbits provide a wide range of features that are highly configurable by each company.

**OCAS:** To improve green technology and relieve enterprises from manual loan/credit processes, the online credit approval system is a completely automated document management solution with archiving. OCAS' features include the ability to automate the complete loan/credit process, including loan application, eligibility verification, automated CRG (Credit Risk Grading), field investigation, client communication, financial analysis, loan approval/rejections, and more. It offers fully automated loan processing for corporate, retail, and small business credit products. Starting with gathering credit requests and routing them through a user-defined workflow, OCAS gives users the power, flexibility, and dynamic workflow they need to get loans processed quickly.

**e-Bdesh:** Through the e-Bdesh solution, ERA InfoTech Ltd. specializes in Microfinance Management Solutions for mobilizing deposits, lending, and building savings habits

among marginal people, particularly women. Since its establishment under LGRD, ERA has worked with the EBK initiative to provide poverty alleviation solutions in rural areas through deposit mobilization, small loan sanctions, and the formation of cooperative groups. EBK is currently converted into Polli Sonchoy Bank, and ERA is also developing and maintaining its core banking solution.

**eAgent:** Being part of its mission to provide banking services to unbanked people while also bringing large numbers of rural people into the financial mainstream, ERA has created an Agent Banking Solution. Innovative process including Bio-Metric, OTP, Webcam, NFC, and Green Banking technology has been used to develop this solution.

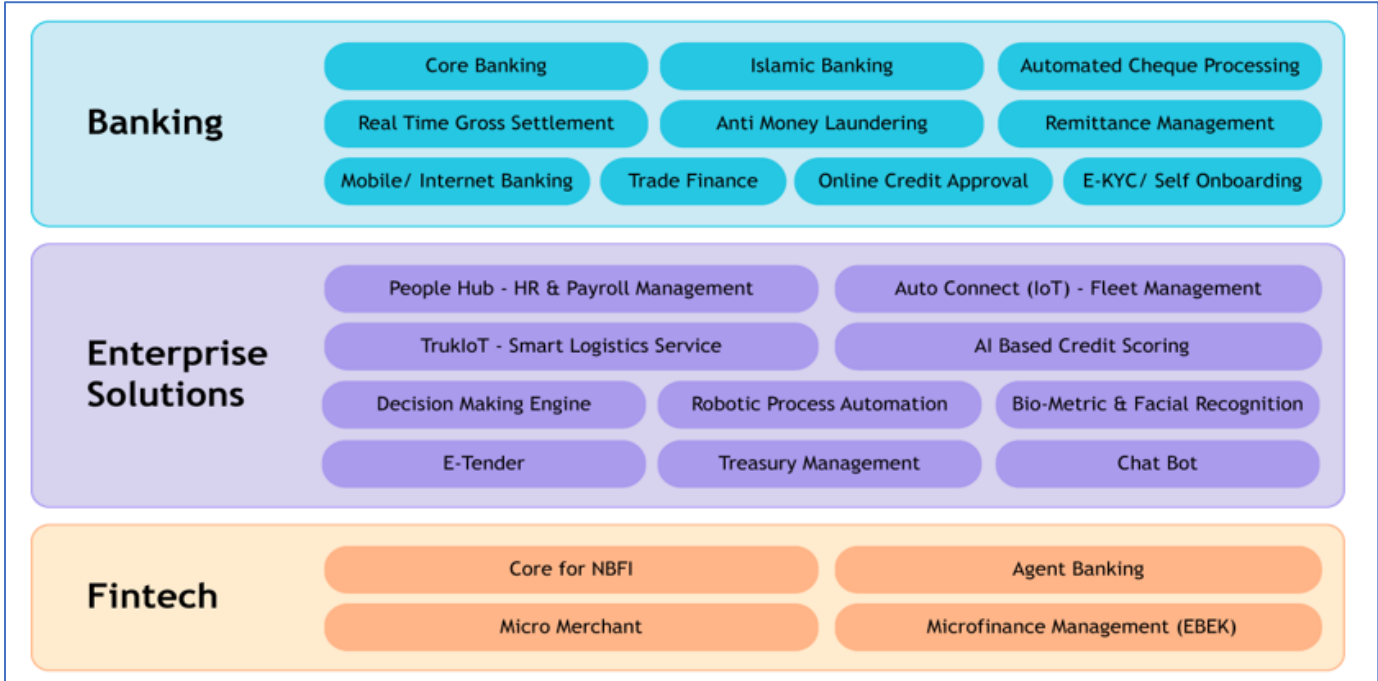


Figure: Products of ERA

## 2.7 Expertise/Tools/Technologies

For a wide spectrum of consumers, ERA offers a wide array of products. This wide range of customers requires ERA to include new technology into their products in order to meet their needs. There were many distinct approaches used by teams competing in the ERA competition.

Web Application Server	Database	Language	Framework	Web Development
<ul style="list-style-type: none"><li>• Apache tomcat</li><li>• Apache HTTPD</li><li>• JBoss</li><li>• Web Logic</li><li>• IIS</li><li>• ORDS</li><li>• NGINX</li></ul>	<ul style="list-style-type: none"><li>• Oracle</li><li>• SQL Server</li><li>• My SQL</li><li>• MongoDB</li><li>• Postgree SQL</li><li>• CosmoDB</li><li>• SQ Lite</li></ul>	<ul style="list-style-type: none"><li>• Java</li><li>• C#</li><li>• PL SQL</li><li>• Python</li><li>• Kotlin</li><li>• Swift</li><li>• C/C++</li></ul>	<ul style="list-style-type: none"><li>• .Net</li><li>• Spring boot</li><li>• MVC</li><li>• Oracle</li><li>• APEX</li><li>• Java SE</li></ul>	<ul style="list-style-type: none"><li>• HTML</li><li>• CSS</li><li>• Bootstrap</li><li>• Java Script</li><li>• JQuery</li><li>• React</li><li>• Angular</li></ul>

Mobile Apps	Reporting	API	CI & CD	Source Code	ALM
<ul style="list-style-type: none"><li>• Android</li><li>• iOS</li><li>• React Native</li><li>• Flutter</li></ul>	<ul style="list-style-type: none"><li>• Crystal Report</li><li>• iReport</li><li>• RDLC</li><li>• Oracle Report Builder</li></ul>	<ul style="list-style-type: none"><li>• Soap</li><li>• Restful</li><li>• Web API</li></ul>	<ul style="list-style-type: none"><li>• Bamboo</li><li>• Jenkins</li></ul>	<ul style="list-style-type: none"><li>• Github</li><li>• Bit Bucket</li></ul>	<ul style="list-style-type: none"><li>• JIRA</li><li>• Redmine</li></ul>

## 2.8 Rules & Regulations

Workers may occasionally deviate from the company's policies. Even if an employee defies the rules with the greatest of intentions, it can disrupt the workplace's flow. It's easier to meet the company's objectives when everyone works together towards a goal and

follows the same rules. ERA has its own set of laws and regulations that must be observed in the workplace.

The following are some of the key principles governing ERA's rules and regulations:

## **Flexibility**

ERA adheres to a semi-rigid set of rules and regulations. In most circumstances, small-scale infractions of rules and regulations have little impact on personnel. The emphasis on rules and regulations is frequently flexible, allowing for a more relaxed and expressive atmosphere.

## **Semi-Formal Attitude**

In their demeanor and approach, ERA does not adhere to rigorous conventions. Employees are free to interact with one another.

## **Dress Code**

Employees at ERA usually dress in semi-formal clothing. Employees are encouraged to dress comfortably; however, excessively casual attire is not permitted.

## **Office Schedule**

The office hours are sufficiently flexible for the personnel. Employees should arrive at the office no later than 9.30 a.m. and stay for at least 8 hours. Lunch and prayer breaks are also included.

## **2.9 Conclusion:**

ERA is one of the country's largest software companies. It offers a wide range of goods and services. Despite its size, ERA maintains a warm and welcoming workplace where employees are all cordial to one another, resulting in a wonderful working experience. Supervisors and seniors are always willing to help; therefore, it functions well as a learning institute. Working with ERA was a great experience for me.

## ***Chapter 3: My Internship at ERA InfoTech Ltd.***

The course outlines in our academic curriculum are structured in such a way that each one serves a specific function in shaping the student to be as well prepared as possible when he or she graduates. The internship program has a purpose as well. The most obvious advantage of the internship program is that it provides real-world, on-the-job training that can never be duplicated in a classroom. Learning how to behave in a professional situation is another major benefit. The former category includes learning about best practices, popular technologies, and processes. The latter category includes things like responsibility, punctuality, cordiality, and respect.

This chapter discusses my internship experiences, my involvement with ERA InfoTech Ltd. during the three months internship period, how I contributed to the firm, and what I learned throughout my internship.

### **3.1 Internship Experience**

ERA is a big software firm in Bangladesh with a number of operational products and services. Working at ERA has provided me with an understanding of how a huge software firm operates and the procedures that are followed.

#### ***3.1.1 ERA InfoTech Ltd.***

I was ecstatic to be able to perform my internship at ERA since it provided me with a fantastic opportunity to learn from some of the country's most experienced software engineers and gain firsthand insight with how a firm operates.

### *3.1.2 Recruitment*

First, I applied for an internship at ERA through the bdjobs website. The HR then contacted me for a written test, followed by an interview in which I was asked casual questions about myself by the CEO, CTO, HR, and Technical Leads. The interview was pleasant, and I was well-received. I was asked to join and begin working a few days later.

### *3.1.3 Facilities Given to Interns*

That internship was compensated. ERA also provided me with a desk, a computer, internet access, and other office items such as stationery during my internship. From the office, snacks and tea/coffee were also available. The office had first aid and other medical supplies on hand.

### *3.1.4 Evaluation Process*

A team leader to keep track of my progress. Each task had a deadline that we had to meet. I received valuable comments based on my progress, which will be extremely useful in my future career.

### *3.1.5 Personal Expectations*

The following are my expectations for what I wanted to obtain out of this internship experience:

- Getting a better understanding of the software development life cycle
- Recognizing the project management challenge
- Gaining knowledge of new technology
- Responsibility and time management
- Good relationship that works

### **3.2 Conclusion**

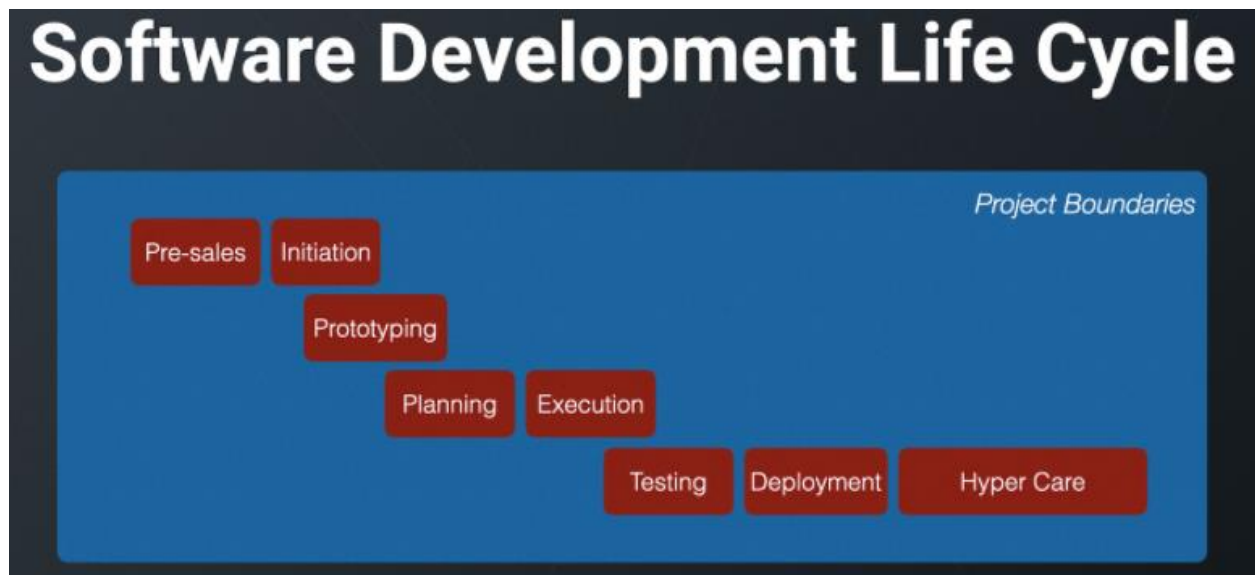
My expectations were fully achieved, and I'm happy with my internship experience. ERA has aided me in learning and honing my skills. The organization has always encouraged me to learn about the technology and processes that I am passionate about. Furthermore, I was given complete control over an entire program, which taught me how to manage and maintain projects on my own.



# ***Chapter 4: Software Development Life Cycle & Project Management Perspective***

## **4.1 Software / System Development Life Cycle (SDLC)**

When a project is started, it must go through a series of processes known as the Software Development Life Cycle (SDLC) before it can be considered complete. Beginning with initiation, concept creation, brainstorming, and requirements analysis, moving on to the design process, development, integration, validation, implementation, prevention, maintenance, and finally completion and support. All phases may not have to be included in a project. The project manager will select how it will be broken down.



These steps lay the groundwork for the development and administration of any software application. A framework for software development, acquisition and configuration is provided by standards such as ISO/IEC 12207 that can be used to create the lifespan of the program. According to the SDLC process, the method used varies by business sector and firm.

Using the SDLC, systems engineers and developers can conceptualize and design new information systems, then build and test them. It is the goal of the SDLC to develop high-quality systems that meet or exceed customer expectations by providing systems that go through each clearly defined step within scheduled timeframes and cost estimates based on client objectives. An SDLC is a process that is similar to an assembly line.

These are the common activities that take place during the Software Development Phases of the project, as summarized below.

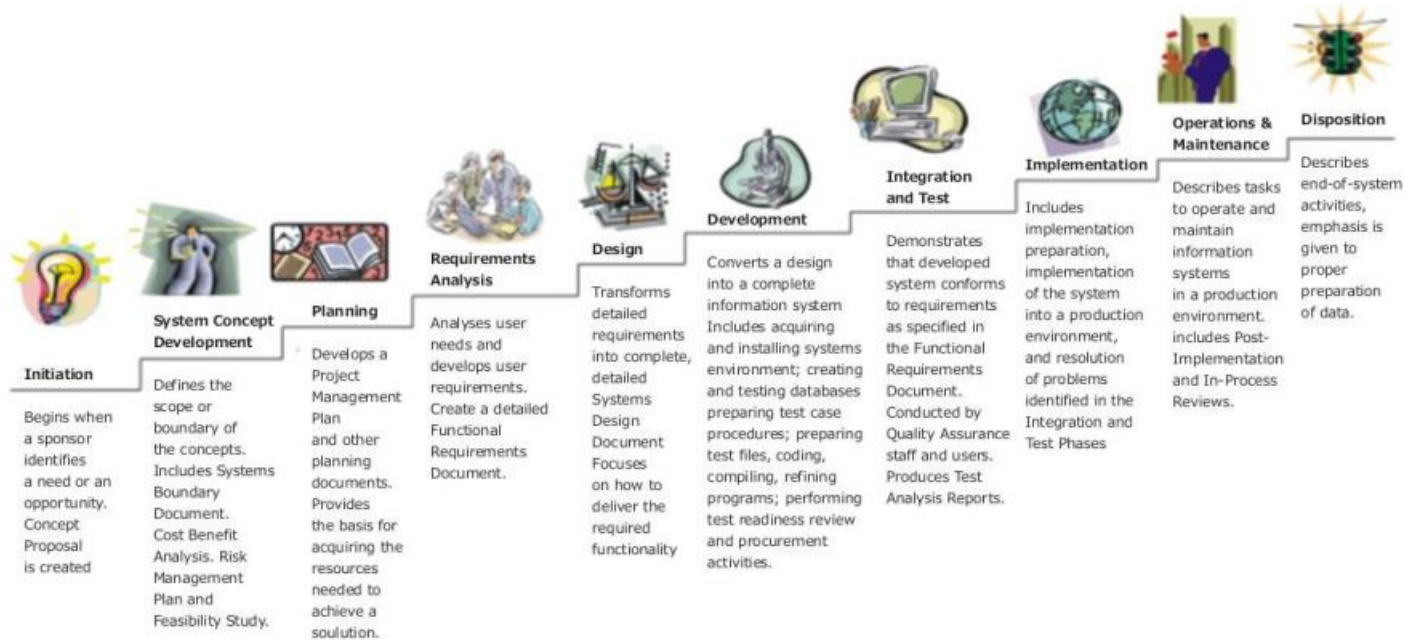
- **Requirement Collection:** To begin, we need to gather and analyze business needs. This phase of the project is very important to the project management and stakeholders. Who will use the system? What are the system's needs for those who will use it? Is there anything they want to do with the system? When it comes time to populate the database, what kinds of data should be entered? Do you know what kind of data you want to collect? These are queries that are addressed throughout the requirements gathering process. Prior to beginning construction, requirements are gathered and validated, as well as their viability to be incorporated into the system. Finally, a document called a Requirement Specification is drafted to serve as a road map for the model's next stage of development.
- **Design:** During this phase, the system and software design is developed in accordance with the needs and specifications that were identified during the first phase's exploration. The system design process assists in the development of the overall system architecture as well as the documentation of hardware and system requirements. It is during this phase of the model's development that it is designed

according to specifications specified by the system. During this phase, the testers develop a test plan that specifies what will be tested and how it will be tested.

- **Implementation / Coding:** To begin actual coding, modules/units are created based on the obtained system design documentation. During this phase, the developer's primary focus is on coding. As far as the software development process is concerned, this is the most time demanding step.
- **Testing:** To ensure that the product fits the needs of the consumer, a code review is required. Non-functional testing includes unit, integration, system, and acceptability testing during this phase.
- **Deployment:** When the product has passed all of its tests, it is given to the consumer. Upon receipt of the product, users can begin beta testing. They'll let the engineering team know if they find any problems or need to make any adjustments. As soon as those tweaks or faults are fixed, the final rollout will take place.
- **Maintenance:** Every time the developed system is used, issues will arise that need to be handled on a frequent basis. The practice of caring for a developed product is referred to as "maintenance".

# Systems Development Life Cycle (SDLC)

## Life-Cycle Phases



The SDLC can be carried out using a number of different approaches. Each has its own set of advantages and disadvantages. A high-level description of a few different SDLC methodologies is provided here.

- Waterfall Model:** The waterfall model is the most common SDLC approach. This model emphasizes obtaining all customer needs early in the project so that every phase of the SDLC may be planned. After the steps have been planned, they must be carried out in sequential order, with each phase being finished before moving on to the next. When the project is familiar and there are few unknowns, its logical structure and ability to set near-accurate predictions for budgets, resources, and timelines make it a popular methodology.

Customers typically don't know exactly what they need at the start of a project, which is one of the model's drawbacks. The use of a formalized structure can slow

down the execution process. If an issue is discovered during the testing phase, correcting it might be highly costly.

- **V-Shaped Model:** A strict, well-thought-out method is followed by the v-shaped form and the waterfall model, respectively. When it comes to the emphasis placed on testing, there is a significant difference between the v-shaped model and the waterfall approach. Testing should be carried out after each stage of the plan in order to reduce the probability of the team making mistakes.

Followings are some of the model's drawbacks: inability to meet deadlines due to rigorous testing and Due to a linear construction, there is a lack of adaptability.

- **Agile Model:** The Agile model was created in response to the waterfall approach's rigidity. Agile is an iterative approach in which a team's priorities are constantly re-evaluated based on regular customer feedback and sprint success. Sprints are two-week work intervals during which the team seeks to complete high-priority items and release a working product for user feedback. The Agile paradigm disproves the notion that you can know everything about a project from the start.

Some of the model's drawbacks: Too much customer feedback can lead to the project going astray. It can be tough to predict timeframes and resources if you don't have a good plan.

- **Big Bang Model:** Using the big bang paradigm, there is almost no planning involved. Rather than depending on the developers' ability to figure out a feasible solution through trial and error, there is a limited focus on obtaining requirements. This approach jumps straight to the coding phase and does it mindlessly. Big bang initiatives are best suited to short-term projects.

## 4.2 Project management

In order to achieve a set of goals and outcomes, a project management team must plan, implement, control, and terminate the activity of the team. Any temporary undertaking with a defined start and end date (sometimes limited in time and frequently bound by funding or deliverables) undertaken to achieve certain goals and objectives, generally to bring about positive change or additional value, is considered a "project".

It's important to know why a project is needed in the first place, record project requirements, describe output quality, estimate resources and time-frames, and monitor progress. business case, receive permission, and secure funding for your project from your company plan the project management approach and put it into action working with a project delivery team to manage risks, problems and revisions to the project plan Controlling the project budget while monitoring progress against the plan and, when it's time to close, keeping in touch with all stakeholders and the provider management of your firm.

### Why Is Project Management Important?



## 4.3 Software Development and Operation Life Cycle at ERA

### 4.3.1 *Initiation*

- ✚ **Project Start Up:** A project has a start and an end date, as well as a delivery target. The signing of the contract led to the start of the project's development. In a standard project model "project start-up" is the very first step.
  
- ✚ **Project Questionnaires:** The project questionnaire is a set of structured questionnaires designed to quickly collect data from a large group of people.
  
- ✚ **Business Case:** A business case is a rationale for a proposed initiative or effort based on the anticipated financial benefit
  
- ✚ **Cost Benefit Analysis:** CBA is a rigorous approach to evaluating the advantages and disadvantages of several solutions in the context of commercial transactions, operations, or functional requirements.
  
- ✚ **Define Technical Solution:** The Solutions Architect creates solution architectural descriptions for a variety of domains, functions, and sectors, then oversees and supervises their implementation.
  
- ✚ **Project Plan:** Cost, time, and procurement are all identified and estimated. Identification, communication, and reporting of stakeholders
  
- ✚ **Project Proposal:** Project proposals are documents that propose a plan of action, explain why it is required, and persuade the reader to agree with and approve the actions recommended in the document's body.

## ✚ Agreement Signoff

**Deliverables of this initiation phase are BRS/RFP, Questionnaires, Feasibility Analysis, Project Proposal and Agreement.**

### *4.3.2 Planning*

- ✚ **Project Kick-off:** The kickoff meeting for a new project is the optimum platform to energize the team and define a shared goal for the project's completion.
- ✚ **SRS Finalization:** The System Requirements Specification outlines the functions and activities that a system must be capable of.
- ✚ **Resource Plan:** A team is usually formed to work on a specific project or job. The team usually ousts once the assignment is completed.
- ✚ **Detail Project Plan:** Budget, schedule, stakeholder communication, quality, procurement, risk response, and stakeholder reporting are all finalized.
- ✚ **Test Case Finalization:** An application, software, system, or one of its features can be tested using a collection of circumstances or variables known as a test case in software engineering.

**Deliverables of planning phase are SRS, Detail Project Plan and Test Case.**

### *4.3.3 Execution*

- ✚ **Application Development:** The processes needed to execute the work stated in the project plan in order to meet the project's requirements are referred to as



executing. The project execution process entails managing people and resources, as well as integrating and carrying out project activities according to the project management plan.

✚ **Unit Test:** The testing phase is a more restricted sort of assessment that looks for flaws in both the inter communication and the system as a whole.

**Deliverables of this phase are Software Development, Detailed Technical SRS and Project Reporting.**

#### *4.3.4 Monitoring and Controlling*

A key function in the monitoring and control phase is to keep tabs on real progress and make corrections as necessary. There is no substitute for constant monitoring and reporting, no matter how meticulously prepared you are. The final step in the software testing process is known as user acceptability testing (UAT). During user acceptance testing (UAT), actual software users evaluate the software to confirm that it meets specifications and can perform required activities in real-world environments.

**Deliverables of this stage are UAT, Release Note, User/Technical Manual**

#### *4.3.5 Closing Phase*

The closing phase of the project life cycle is a single operation, but it involves more than merely completing the project. Obtaining the client, stakeholders, and/or project

sponsor's approval or signature is crucial to officially closing the project. The following are possible steps in this procedure:

- ✚ The project's completion
- ✚ Organizing a post-mortem session
- ✚ Keeping track of project documents
- ✚ Celebrating or recognizing the accomplishment
- ✚ Disbanding or releasing the team officially

**Deliverables of this phase are detailed roll out plan, project sign-off, lesson learning, support issue log**

#### **4.4 My Task During Internship Period**

During the internship period, I was assigned to co-ordinate the implementation of Agent Banking Solution at UCBL and assist Mr. Maruf Parvez Khan, project manager of Agent Banking Project to project related different works.

ERA already got the work order of this project before my joining and so I didn't get the chance to work in the presales/initiation phase of that project. I was there from the kickoff meeting.

My job entailed following up with a project team in the event that different tasks were completed. Aside from that, I prepared project task list in the MS project with the help of our project manager. Following that, a kick-off meeting was held. The minutes of the Kick-off meeting was taken by myself. I followed up with the developers during development and unit testing, as well as the testers during full-cycle testing and regression testing of

the new system. After the testing was completed, I scheduled numerous physical UAT sessions with our project team and UCBL stakeholders.

As it was a newly developed system many feedbacks were coming. I followed up these observations with the development team to fix up and do UAT again. Finally, after so many UAT sessions users were satisfied have to see their newly automated system. End-users acknowledge the successful UAT by sending the signed UAT signoff form. Our project managers then gathered the appropriate clearances and scheduled a live deployment session with the technical team to go live with the project. Following the live deployment, we requested that end-users test the system's functionality from their end. They checked for a week and then affirmed that everything was well with us. The system was then permanently installed and declared active via email distribution. After that, I wrote a project closure document, and our project manager eventually completed the project.

## ***Chapter 5: Recommendation and Conclusion***

### **5.1 Recommendation**

I have completed a three-month internship at ERA InfoTech Ltd. During this internship, I've had a lot of help from my coworkers. Employees at ERA enjoy a pleasant working environment. I worked on a project called "Agent Banking Solution for UCBL" throughout my internship. However, during my internship, I discovered certain findings and made some recommendations, which are listed below:

The Head of Software Operations receives monthly updates from all project managers. Before being transmitted to ERA and UCBL administration, the reports are reviewed by HoSWO. In the following meeting, the ERA project managers analyze the monthly report with ERA and UCBL management and resolve any issues. If ERA decides to hold this meeting every week, I feel that the issues of the conflict will be addressed and handled more quickly.

For each month, an excel spreadsheet is used to manually compile ERA's report. It takes around two days to put together a full report, including graphics. There is a plethora of options for project management (Jira, Redmine, Trello, etc.). Project reports could be prepared automatically if ERA could afford to buy and use a project management application. Time and money could be saved by utilizing this project management tool.

As I observed during my internship, project stakeholder contact with technical resources was common. It is expected that project managers and coordinators will be contacted by stakeholders or clients on project activity in the majority of cases. There have been several instances of miscommunication and confusion between the parties. Consequently, the

project cannot be finished on time. The project will be finished on time and according to plan if the project team and stakeholders are able to communicate effectively in all areas of the project.

## **5.2 Conclusion**

For us, the internship program is a fantastic opportunity to learn about the industry and diverse techniques. It also educates us about the many abilities required to work in a team environment. It teaches us something we could never learn in a classroom.

I had a great time at ERA and learned a lot of things that will help me advance in my job and academic studies. I was able to put a lot of the things I learned in class into practice. In addition, I have acquired excellent contacts in the sector and have greatly expanded my network.

I learnt about various project management responsibilities and processes, as well as a variety of new technologies and a variety of abilities that are necessary for creating a career and giving me a competitive advantage over other project managers in the future.

I am grateful to BRAC University, my institute, for providing me with a high-quality education and knowledge over the years.

## References

*ERA InfoTech Ltd.* (n.d.). Retrieved from ERA InfoTech Ltd: <https://erainfotechbd.com/>

*Practical Project Management.* (n.d.). Retrieved from <https://pmbasics101.com/>:  
[https://pmbasics101.com/software-development-life-cycle/#:~:text=Software%20Development%20Life%20Cycle%20\(SDLC,its%20start%20to%20its%20completion.&text=A%20project%20phase%20is%20a,to%20include%20all%20the%20phases.](https://pmbasics101.com/software-development-life-cycle/#:~:text=Software%20Development%20Life%20Cycle%20(SDLC,its%20start%20to%20its%20completion.&text=A%20project%20phase%20is%20a,to%20include%20all%20the%20phases.)

*Project Life Cycle.* (n.d.). Retrieved from Workfront: <https://www.workfront.com/project-management/life-cycle#:~:text=The%20project%20life%20cycle%20includes,monitoring%2Fcontrolling%2C%20and%20closing.>

*SDLC – The Software Development Life Cycle.* (n.d.). Retrieved from Project Manager :  
<https://www.projectmanager.com/software/use-cases/sdlc>