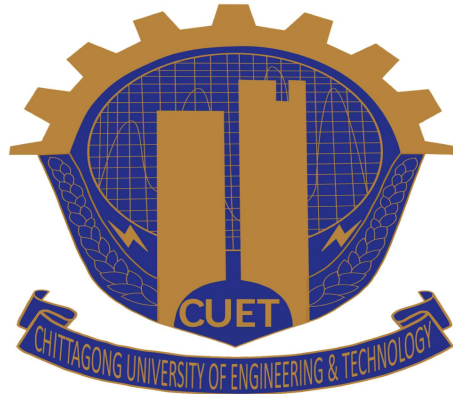


# Chittagong University of Engineering and Technology



## Department of Computer Science and Engineering

Course Code : CSE-354

Course Title : Systems Analysis and Design (Sessional)

### System Analysis and Design on Islami Bank Bangladesh Limited (Jatrabari Branch)

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## **1. Introduction**

A feasibility study is a thorough evaluation that takes into account all of the important factors of a proposed project to ascertain the chances of success. Return on investment, which indicates that the project will produce enough profit to justify the investment, is one way to describe success in business. On the plus or negative side, many additional significant aspects, such as the impact on the surrounding neighborhood and the environment, can be found. Although feasibility studies can assist project managers in assessing the risk and rewards of continuing an action plan, there are still a number of factors to take into account before proceeding. A feasibility study evaluates how feasible a proposed plan or project is. The viability of a project is examined in a feasibility study to ascertain its likelihood of success. The analysis is intended to uncover possible concerns and challenges that might develop when the project is being pursued. As part of the feasibility study, project managers must determine whether they have enough of the right people, financial resources, and technology. The study must also determine the return on investment, whether this is measured as a financial gain or a benefit to society, as in the case of a nonprofit project.

## **2. Objectives**

- To determine the viability of a proposed project or idea by evaluating its potential for success
- To understand the concept of different kinds of feasibility such as Operational, Technical, and Economical feasibility
- To determine whether the project is viable, practical, and worth pursuing
- To calculate the payback period

## **3. Types of Feasibility Analysis**

### **3.1. Technical Feasibility**

Technical feasibility, can be described as the formal process of assessing whether it is technically possible to manufacture a product or service. Before launching a

new offering or taking up a client project, it is essential to plan and prepare for every step of the operation. Technical feasibility helps determine the efficacy of the proposed plan by analyzing the process, including tools, technology, material, labor, and logistics. A technical feasibility study helps organizations determine whether they have the technical resources to convert the idea into a fully functional and profitable working system.

### **3.2. Operational Feasibility**

Operational feasibility is the capacity of an organization to successfully and efficiently adopt and operate a suggested solution, within its current operational conditions. This entails evaluating the organizational structure, and procedures as well as the technical, financial, and human resources needed for the project. The goal of operational feasibility is to ascertain whether the proposed solution will satisfy the demands and expectations of its stakeholders while remaining realistic and doable within the organizational restrictions. An operational feasibility assessment that is positive can result in the successful implementation and operation of the solution, whereas an operational feasibility assessment that is unfavorable can result in the project being re-evaluated, modified, or abandoned.

### **3.3. Economic Feasibility**

Determine the financial viability of a suggested solution, project, or system using an economic feasibility study. It entails evaluating the project's costs, advantages, and risks to decide whether it is worthwhile to invest in. An economic feasibility study's goal is to establish whether the project's anticipated benefits outweigh its time and financial expenses. Organizations can use this assessment to assist them to decide whether or not to move forward with a project. Considerations for economic viability include prospective revenue or cost savings, start-up costs, ongoing costs, and recurrent costs. It also takes into account the project's potential return on investment, payback period, and effects on the cash flow of the business, as well as those of its stakeholders. The research may also take into

account prospective future advantages and disadvantages, as well as outside variables like market trends, rivalry, and economic conditions that could affect the project's financial viability.

#### **4. Limitations of the Current System**

- Space issues due to a large number of customers
- The current mobile banking system requires a firm foundation

#### **5. Proposed System**

In IBBL, the clients' appearance is improving daily. Our chosen bank is located in Jatrabari, one of the busiest neighborhoods of Dhaka City. The service providers have a lot of difficulties while they are at work. Therefore, if it is possible to increase the capacity of the current bank, it will be beneficial for both consumers and bankers. Another drawback that has been pointed up to us is that their app, CellFin, has to be improved because their mobile banking system is still in its infancy. Again, not everyone finds it to be popular. Therefore, effective marketing is required to reach a large audience. In summary:

- IBBL needs to expand the current capacity
- They must employ robust marketing techniques for CellFin

##### **5.1. Office Capacity Expansion**

###### **5.1.1. Technical Feasibility**

- Require extra space(floor) which increases office area
- Require hardware and software support

###### **5.1.2. Operational Feasibility**

- Require more human resources to conduct extra work
- Increment of customer service

### 5.1.3. Economic Feasibility

**Table 01:** Investment on capacity expansion

Investment Area	Cost(In Taka)
Pledge for renting(2000 sq ft)	15,00,000
Decoration	5,00,000
Hardware	10,00,000
Total Investment	30,00,000

**Table 02:** Cost per year

Cost Area	Cost(In Taka)
Rent per year	$50,000 \times 12 = 6,00,000$
Salary of new employees(69)	Senior Vice Principal= $1,60,000 \times 1 = 1,60,000$ First Assistant Vice Principal= $1,40,000 \times 3 = 4,20,000$ Senior Principal Officer = $1,10,000 \times 7 \times 12 = 92,40,000$ Principal Officer = $75,000 \times 8 \times 12 = 72,00,000$ Senior Officer = $65,000 \times 8 \times 12 = 62,40,000$ Officer = $50,000 \times 11 \times 12 = 66,00,000$ Junior Officer = $35,000 \times 14 \times 12 = 58,80,000$ Assistant Officer = $28,000 \times 17 \times 12 = 57,12,000$
Hardware Maintenance	3,00,000
Software Maintenance	3,45,000
Interior Maintenance	1,77,000
Clerks and Security Guards	5,50,000
Total Cost	4,26,24,000

**Table 03:** Payback period calculation(in taka)

Total Investment	30,00,000
Total Cost(Per Year)	4,26,24,000
Expected Income	5,52,72,000
Net Benefit	=Expected Income - Total Cost =5,52,72,000 - 4,26,24,000 =1,26,48,000
Payback Period	=Investment/Net Benefit =30,00,000/1,26,48,000 =0.237 years ~ 3 months (approx.)

## **5.2. Online Based System**

### **5.2.1. Technical Feasibility**

- Require a specialist IT team, which is manageable
- Require large server and data storage capacity, which are also manageable
- Enhanced network utility

### **5.2.2. Operational Feasibility**

- Easy banking services daily
- User needs to be able to use smart devices
- Transaction gets easier

### **5.2.3. Economic Feasibility**

Islami Bank Bangladesh Limited has already developed an app named CellFin. It is well-established and user-friendly. At this point, our main focus is on marketing the app to mass people.

**Table 04:** Investment to upgrade system

Investment Area	Cost(In Taka)
New App Feature addition	30,00,000
Advertising Cost	23,45,000
IT Officer Training	12,00,000
Total Investment	65,45,000

**Table 05:** Cost per year

Cost Area	Cost(In Taka)
IT Officer salary	4,52,20,000
Server Cost	1,22,00,000
Server and App Maintenance	10,00,000
App Hosting charge	$18000 \times 12 = 2,16,000$
Total Cost	5,86,36,000

**Table 06:** Payback period calculation(in taka)

Total Investment	65,45,000
Total Cost(Per Year)	5,86,36,000
Expected Income	8,75,23,000
Net Benefit	$= \text{Expected Income} - \text{Total Cost}$ $= 8,75,23,000 - 5,86,36,000$ $= 2,88,87,000$
Payback Period	$= \text{Investment} / \text{Net Benefit}$ $= 65,45,000 / 2,88,87,000$ $= 0.2265 \text{ years}$ $\sim 3 \text{ months (approx.)}$



## **6. Comparison of Proposed Solution**

First solution(Office capacity expansion) is the technically feasible but operationally and economically second solution(Online based system) is more feasible. The first solution has low benefits and its payback period is moderate. On the other hand, the second solution also has a good income, and the payback period is lesser than the first solution. We have analyzed the feasibility of two proposals and also calculated which one is optimum. So, we proposed the second solution(Online banking system) is more feasible.

## **7. Conclusion**

In conclusion, there are benefits and drawbacks to both conventional and internet banking. Online banking offers fewer fees and frequently greater interest rates, as well as the ease of making financial transactions with a few clicks from any location, at any time. Contrarily, physical banking gives clients access to tangible currency and services that might not be offered online, as well as a personal touch and face-to-face engagement with bank staff. The ideal option will ultimately depend on the particular requirements and preferences of the individual. Some clients could decide to use both forms of banking in order to profit from each one's advantages.