

## **Web Application Engineering**

### **Project: Online Fundraising and Donations Portal**

#### **Group Members:**

**Rashed Hassan Siam (FH-2343)**

**Md. Shakhawath Hossain Nur (FH-2323)**

#### **Online Fundraising and Donations Portal**

This report outlines the Web Engineering Process for the project titled "Online Fundraising and Donations Portal." The report details the Communication, Planning, and Modeling phases of Web Application Engineering.

#### **Web Engineering Process Framework and Umbrella Activities**

The Web Engineering Process includes several critical framework and umbrella activities that must be performed in a suitable order:

**Project Initiation:** Defining objectives, gathering requirements, and identifying stakeholders.

**Requirements Engineering:** Understanding user needs, defining functional and non-functional requirements, and gathering data from stakeholders.

**Design and Prototyping:** Crafting an interface design, selecting technologies, and building prototypes.

**Implementation and Testing:** Coding the system and performing rigorous testing, such as unit, integration, and system testing.

**Deployment and Maintenance:** Deploying the system and monitoring its functionality over time, including bug fixes, performance enhancements, and new feature additions.

**Evaluation:** Continual assessment of the system to improve efficiency and meet evolving requirements.

#### **Communication Phase**

The Communication Phase involves gathering and defining the requirements for the project through discussions with stakeholders. This phase is critical for ensuring all user needs are clearly understood and addressed.

##### **Stakeholder Questionnaire:**

1. What are the key requirements and functionalities needed in the donation portal?
2. What are the expectations regarding security and data privacy for donor and NGO information?
3. How will the donation verification process be handled?
4. Are there any specific reporting and analytics needs?
5. What donation methods should be supported?

##### **Formulation Tasks:**

1. Clarify and document the scope of the project.
2. Identify all users and stakeholders (NGOs, Admins, Donors).
3. Collect specific functional and non-functional requirements.

### **Elicitation Tasks:**

1. Interview stakeholders to understand user needs and expectations.
2. Create and distribute surveys for donor and NGO feedback.

### **Negotiation Tasks:**

1. Address conflicts or differing priorities between stakeholders.
2. Finalize project scope and timelines through negotiation.

## **Planning Phase**

The Planning Phase focuses on setting the foundation for the project by defining the project scope, constraints, performance requirements, and more. It also includes scheduling, risk management, and change management.

### **Project Scope:**

1. **Context:** An online donations platform for NGOs and donors.
2. **Information Objectives:** Facilitate donations and NGO requests.
3. **Functionality:** Secure user authentication, easy donation methods, and real-time updates on donation status.
4. **Constraints:** Security, ease of use, support for multiple currencies, and scalability.
5. **Performance Requirements:** Fast and responsive interface, high uptime, and secure transactions.

**Schedule:** Defining milestones and deadlines for project phases: initiation, design, implementation, testing, deployment.

**Risk Management:** Identifying potential risks like data security, integration issues with payment gateways, and unforeseen delays. Mitigating risks by adopting agile methods and continuous testing.

**Change Management:** Implementing change control processes to manage scope changes.

## **Modeling Phase**

In the Modeling Phase, the system is broken down into manageable increments. Each increment focuses on a specific set of functionalities and is developed iteratively.

### **Number of Increments:**

- Increment 1:** Initial system setup, including basic donation and request modules. (Timeline: 2 weeks)
- Increment 2:** Payment gateway integration and admin dashboard functionalities. (Timeline: 3 weeks)
- Increment 3:** Donor interface, user authentication, and donation tracking features. (Timeline: 3 weeks)
- Increment 4:** Security enhancements, final testing, and deployment. (Timeline: 2 weeks)