



THE YENEPOYA INSTITUTE OF ARTS SCIENCE  
COMMERCE AND MANAGEMENT  
(a constituent unit of Yenepoya Deemed to be University)

# **WEB APPLICATION DEPLOYMENT ON IBM CLOUD FOUNDRY**

## **PROJECT SYNOPSIS**

MASTER OF COMPUTER SCIENCE AND APPLICATIONS

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# TABLE OF CONTENTS

Cover page - - - - -	1
Title - - - - -	2
Content - - - - -	3
1.1 Introduction - - - - -	4
1.2 Key Features	
1.3 Technology Stack	
1.4 Specialized Field:	
2.1 Methodology- - - - -	5
2.2 Requirement Analysis and Tool Selection	
2.3 System Architecture and Design	
2.4 Frontend Development	
2.5 Backend Integration	
2.6 Final Testing and Documentation	
3.1 Facilities required for proposed work - - - - -	6
3.2 Development Environment	
3.3 Detection & Mitigation Tools	
3.4 Testing and Deployment	
3.5 Reporting Tools	

## 1.1 Introduction:

This project focuses on deploying a dynamic and interactive web application using IBM Cloud Foundry. The goal is to utilize cloud infrastructure for scalability, reliability, and efficient resource utilization while implementing a functional web application. The deployment process ensures that the application is accessible globally with minimal maintenance and optimal performance.

## 1.2 Key Features :

- ✓ Responsive User Interface
- ✓ Secure User Authentication and Data Handling
- ✓ Integrated Database for Dynamic Content
- ✓ Deployment on IBM Cloud Foundry
- ✓ Scalable and Modular Design

## 1.3 Technology Stack Frontend:

- ✓ HTML5, CSS3, JavaScript
- ✓ PHP
- ✓ MySQL database
- ✓ Apache Server (XAMPP)

Cloud: ✓ IBM Cloud Foundry ✓ GitHub for version control and collaboration

## 1.4 Specialized Field:

Cloud Computing This project falls under the field of cloud computing with a focus on Platform as a Service (PaaS) via IBM Cloud Foundry. It enables modern web application deployment practices in a real-world cloud environment.

## 2.1 Methodology :

A structured software development lifecycle approach has been followed for building and deploying the application.

## **2.2 Requirement Analysis and Tool Selection:**

- ✓ Identify core features like user login, photo uploads, post creation, and profile management.
- ✓ Select HTML, CSS, JS for frontend and PHP, MySQL for backend.
- ✓ Choose IBM Cloud Foundry as the deployment platform.

## **2.3 System Architecture and Design :**

- ✓ Follow MVC architecture.
- ✓ Create modular components for scalability and maintainability.
- ✓ Design a responsive and user-friendly interface.

## **2.4 Frontend and Backend Development :**

- ✓ Develop UI with HTML5/CSS3 and JS.
- ✓ Backend logic using PHP.
- ✓ Database management via MySQL.

## **2.5 Deployment**

- ✓ Set up IBM Cloud CLI.
- ✓ Configure manifest.yml for deployment.
- ✓ Push application to IBM Cloud Foundry.

## **2.6 Final Testing and Documentation**

- ✓ Perform functional and usability testing.
- ✓ Fix bugs and optimize performance.
- ✓ Prepare user manual and technical documentation.

## **3.1 Facilities Required for Proposed Work**

- ✓ Laptop/Desktop with 8 GB RAM or above
- ✓ High-speed internet
- ✓ IBM Cloud account

### **3.2 Development Environment :**

- ✓ VSCode IDE
- ✓ XAMPP (Apache, MySQL, PHP)
- ✓ Git & GitHub for version control

### **3.3 Cloud Deployment Tools**

- ✓ IBM Cloud CLI
- ✓ Cloud Foundry CLI

### **3.4 Testing and Version Control**

- ✓ Postman for API testing
- ✓ GitHub for managing code versions

### **3.5 Reporting Tools**

- ✓ MS Word for documentation
- ✓ Diagram tools like draw.io for architecture representation



project-root/

- |— sql/
  - |— SQL script.txt
- |— css/
  - |— 404.css
  - |— edit-profile.css
  - |— explore.css
  - |— feed.css
  - |— footer.css
  - |— global.css
  - |— iphone.css
  - |— login.css
  - |— navigation.css
  - |— profile.css
  - |— reset.css
  - |— style.css
- |— images/
  - |— (image files)
- |— js/
  - |— app.js
  - |— comment\_jQuery.js
- |— photos/
  - |— (user uploaded photos)
- |— inc/
  - |— connect.php
- |— pages/
  - |— 404.php
  - |— create\_account.php
  - |— create\_post.php

- | | — edit-profile.php
- | | — explore.php
- | | — feed.php
- | | — follow.php
- | | — image-detail.php
- | | — index.php
- | | — like.php
- | | — login.php
- | | — post.php
- | | — profile.php
- | | — registration.php
- | | — signin.php
- | | — submit-post.php
- | | — submit-profile.php
- | | — unfollow.php
- | — .htaccess
- | — README.md
- | — comment.php
- | — (other potential top-level files)