**E-Shopping Platform**

A Project-II Report

Submitted in partial fulfillment of requirement of the

Degree of

**BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE & ENGINEERING**

BY

**Rashi Agrawal**

**EN18CS301196**

Under the Guidance of

**Mr. Hemant K. Pathak**



**Department of Computer Science & Engineering**

**Faculty of Engineering**

**MEDI-CAPS UNIVERSITY, INDORE- 453331**

**April 2022**

**Report Approval**

The project work **“E-Shopping Platform”** is hereby approved as a creditable study of an engineering/computer application subject carried out and presented in a manner satisfactory to warrant its acceptance as prerequisite for the Degree for which it has been submitted.

It is to be understood that by this approval the undersigned do not endorse or approved any statement made, opinion expressed, or conclusion drawn there in; but approve the “Project Report” only for the purpose for which it has been submitted.

Internal Examiner

Name: Mr. Hemant K. Pathak

Designation: Professor

Affiliation: Project Guide

External Examiner

Name:

Designation

Affiliation

**Declaration**

I/We hereby declare that the project entitled **“E-Shopping Platform”** submittedin partial fulfillment for the award of the degree of Bachelor of Technology in ’Computer Science Engineering’ completed under the supervision of **<Name, designation and department of the Guide(s)>,** Faculty of Engineering, Medi-Caps University Indore is an authentic work.

Further, I/we declare that the content of this Project work, in full or in parts, have neither been taken from any other source nor have been submitted to any other Institute or University for the award of any degree or diploma.

Rashi Agrawal

11-04-2022

**Signature and name of the student(s) with date**

**Certificate**

I/We, **Hemant K. Pathak** certify that the project entitled **“E-Shopping Platform”** submittedin partial fulfillment for the award of the degree of Bachelor of Technology by **Rashi Agrawal** istherecordcarried out by him/them under my/our guidance and that the work has not formed the basis of award of any other degree elsewhere.

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Mr. Hemant K. Pathak

Faculty of Engineering

Medi-Caps University, Indore

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Dr. Pramod S. Nair

Head of the Department

Computer Science & Engineering

Medi-Caps University, Indore

**Offer Letter of the Project work-II/Internship**

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**Completion certificate/Letter**

**NOT RECEIVED YET**

**Acknowledgement**

I would like to express my deepest gratitude to Honorable Chancellor, **Shri R C Mittal,** who has provided me with every facility to successfully carry out this project, and my profound indebtedness to **Prof. (Dr.) Dileep K Patnayak,** Vice Chancellor, Medi-Caps University, whose unfailing support and enthusiasm has always boosted up my morale. I also thank **Prof. (Dr.) D K Panda,** Pro Vice Chancellor, **Dr. Suresh Jain,** DeanFaculty of Engineering, Medi-Caps University, for giving me a chance to work on this project. I would also like to thank my Head of the Department **Dr. Pramod S. Nair** for his continuous encouragement for betterment of the project.

I express my heartfelt gratitude to my **External Guide, Mr. Dilip Bhaidiya**, Solution Engineer, Deqode, Indore as well as to my Internal Guide, **Mr. Hemant K. Pathak, Professor, Department of Computer Science Engineering, MU**, without whose continuous help and support, this project would ever have reached to the completion.

I would also like to thank to my team at Deqode, Indore who extended their kind support and help towards the completion of this project.

It is their help and support, due to which we became able to complete the design and technical report. Without their support this report would not have been possible.

**Rashi Agrawal**

B.Tech. IV Year

Department of Computer Science & Engineering

Faculty of Engineering

Medi-Caps University, Indore

**Executive Summary**

Based on the learnings of RoR and Ruby in my training and my current domain as a backend RoR solution engineer trainee at the company, I have created an online shopping(E-Shopping) platform using Ruby on Rails (RoR) framework.

The purpose of the project is to create a shopping platform for users where they can create their profiles, browse products, place orders, and check their profile details along with current and previous order details. Users can also cancel order as per their convenience.

The application has been created using all major features of Ruby on Rails framework as per my training at Deqode, Indore.

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**About the Company**

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At Deqode, our purpose is to help businesses solve complex problems using new-age technologies. We are industry leaders in cutting-edge technologies, and we leverage our deep industry knowledge and technical expertise to optimize business processes, maximize impact and foster business growth. We are driven by our passion to innovate and create solutions that inspire the future.

Deqode has a robust history, which began when a group of technical architects and consultants established Techracers. Despite having the same executives, we ideologically progressed in 2019. Hence, adopting a new name and brand identity was the need of the times.

Deqode expresses what we have become as an organization as well as what we hope to be - a solution provider that transcends the boundaries of traditional information technology companies and decodes business problems with quality solutions, quickly delivered.

Company History:

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The company provides services like –

**Web Development Services**

Deqode helps startups and enterprise companies create better web products faster using a sprint-based model. Our designers, UX experts, and web development veterans work together to rapidly create and scale high-quality web applications in a cost-effective manner.

**Mobile Development Services**

When it comes to mobile application development, Deqode provides both speed and scalability: our designers, UX experts - along with iOS, Android and hybrid app development veterans work together to rapidly create and scale high-quality mobile apps in a cost-effective manner.

* 100+ web and mobile applications delivered
* 100+ man-years of collective web and mobile development experience
* High-profile POC and pilot programs analysis
* Lean processes
* Mobile-first approach

**Blockchain**

Deqode offers a complete portfolio of enterprise blockchain solutions to rapidly integrate the technology with your existing business process and accelerate your digital innovation journey. From ideation to deployment, we help you build the future of decentralized technology.

* Customers Across 20+ countries
* 30+ end-to-end blockchain project deliveries
* 50+ man-years of collective blockchain experience
* Experts in making changes on a protocol level

**Digital Transformation**

Incorporating artificial intelligence into business systems and processes is a journey unlike any other digital technology implementation. We help companies find, frame and solve unique business problems that leverage artificial intelligence and automation to create measurable business value.

By combining your knowledge with our artificial intelligence expertise, we help you harness the power of AI and transform the way you use your data. We're on a mission to push the boundaries of AI, developing programs that can learn to solve any complex problem without any human interference.

**Salesforce Solutions**

Deqode’s salesforce consultancy helps companies in the tailored implementation of Salesforce products successfully into their business processes. We can help you with extensive expertise and proprietary solutions to speed up Salesforce development and lower your implementation costs.

**Website**

<https://www.deqode.com>

**Industry**

IT Services and IT Consulting

**Company size**

201-500 employees

307 on LinkedIn Includes members with current employer listed as Deqode, including part-time roles.

**Headquarters**

Indore, Madhya Pradesh

**Specialties**

Blockchain, DLT, Software, Development, Technology, Solutions, Consultancy, Crypto, and Application

**Internship Details**

My internship started from 3rd Jan 2022. I’m hired as a Solution Engineer Trainee. I’m part of Backend II team at Deqode that works on RoR (Ruby on Rails) development projects.

Initially I was provided basic training that included Linux, Git, JavaScript, HTML, CSS, and Web Terminologies. Later, I was trained in Ruby and Ruby on Rails framework which is my main domain in the company as a solution engineer.

Technology Stack used –

* GitHub
* Linux
* Ruby on Rails
* Ruby
* PostgreSQL
* Elastic Search
* JavaScript

|  |  |
| --- | --- |
| **Role** | Solution Engineer Trainee |
| **Domain** | Backend Development |
| **Technology** | Ruby on Rails (RoR) |
| **Joining Date** | 3rd January 2022 |

**About Project**

**E-Shopping Platform**

An online shopping platform (E-Shopping) developed using RoR framework for both frontend and backend functionalities.

The technologies/services used in this project include:

* Ruby
* RoR
* GitHub
* HTML, CSS, JavaScript
* SQLite3

**1. Ruby:**

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Ruby is a dynamic, reflective, object-oriented, general-purpose programming language. Ruby is a pure Object-Oriented language developed by Yukihiro Matsumoto. Everything in Ruby is an object except the blocks but there are replacements too for it i.e., procs and lambda. The objective of Ruby’s development was to make it act as a sensible buffer between human programmers and the underlying computing machinery.

Since its public release in 1995, Ruby has drawn devoted coders worldwide. In 2006, Ruby achieved mass acceptance. With active user groups formed in the world’s major cities and Ruby-related conferences filled.

**2. Ruby on Rails (RoR):**

**Logo

Description automatically generated**

Ruby on Rails or also known as rails is a server-side web application development framework that is written in the Ruby programming language, and it is developed by David Heinemeier Hansson under the MIT License. It supports MVC(model-view-controller) architecture that provides a default structure for database, web pages, and web services, it also uses web standards like JSON or XML for transfer data and [HTML](https://www.geeksforgeeks.org/html-tutorials/), [CSS](https://www.geeksforgeeks.org/css-tutorials/), and [JavaScript](https://www.geeksforgeeks.org/javascript-tutorial/) for the user interface. It emphasizes the use of other well-known software engineering pattern and paradigms like:

* **Don’t Repeat Yourself (DRY):** It is a principle of software development to reducing the repetition of information or codes.
* **Convention Over Configuration (CoC):**Itprovides many opinions for the best way to do many things in a web application.

Ruby on Rails was first released in July 2004 but until February 2005 did not share the commit rights.

**Why Ruby on Rails?**

* It allows you to launch a faster web application.
* Saves your money by using the Ruby on Rails framework.
* Helps us with maintaining and avoiding problems with stuff migration.
* Ruby on Rail Framework makes our app faster and safer.
* We can easily update our app with the latest functionality.
* It uses Metaprogramming techniques to write programs.

**Where to use Ruby on Rails?**

You can use Ruby on Rails application in various area of web development like in a long-term project which needs large transformation, or in the project that has heavy traffic, or to develop a short prototype or MVPs, or in a project that requires wide range of complex functions, etc.

**3. GitHub:**

GitHub, Inc. is a provider of [Internet hosting](https://en.wikipedia.org/wiki/Internet_hosting_service) for [software development](https://en.wikipedia.org/wiki/Software_development) and [version control](https://en.wikipedia.org/wiki/Version_control) using [Git](https://en.wikipedia.org/wiki/Git). It offers the [distributed version control](https://en.wikipedia.org/wiki/Distributed_version_control) and [source code management](https://en.wikipedia.org/wiki/Source_code_management) (SCM) functionality of Git, plus its own features. It provides [access control](https://en.wikipedia.org/wiki/Access_control) and several collaboration features such as [bug tracking](https://en.wikipedia.org/wiki/Bug_tracking_system), [feature](https://en.wikipedia.org/wiki/Software_feature) requests, [task management](https://en.wikipedia.org/wiki/Task_management), [continuous integration](https://en.wikipedia.org/wiki/Continuous_integration) and [wikis](https://en.wikipedia.org/wiki/Wiki) for every project. Headquartered in [California](https://en.wikipedia.org/wiki/California), it has been a subsidiary of [Microsoft](https://en.wikipedia.org/wiki/Microsoft) since 2018.

It is commonly used to host [open source](https://en.wikipedia.org/wiki/Open-source) projects. As of November 2021, GitHub reports having over 73 million developers and more than 200 million [repositories](https://en.wikipedia.org/wiki/Repository_(version_control)) (including at least 28 million public repositories). It is the largest [source code](https://en.wikipedia.org/wiki/Source_code) host as of November 2021.

Shape

Description automatically generated with medium confidence

**4. HTML & CSS:**

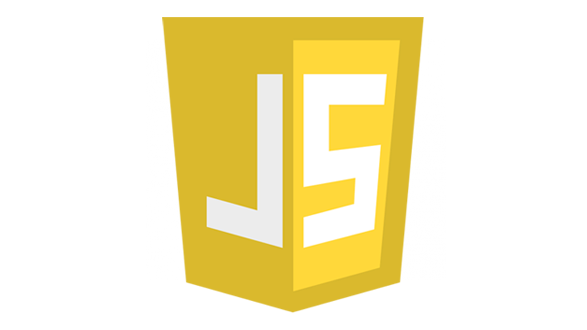
[HTML](https://www.w3.org/html/) (the Hypertext Markup Language) and [CSS](https://www.w3.org/Style/CSS/) (Cascading Style Sheets) are two of the core technologies for building Web pages. HTML provides the structure of the page, CSS the (visual and aural) layout, for a variety of devices. Along with [graphics](https://www.w3.org/standards/webdesign/graphics) and [scripting](https://www.w3.org/standards/webdesign/script), HTML and CSS are the basis of building Web pages and Web Applications.

A picture containing text, first-aid kit

Description automatically generated

**5. JavaScript:**

JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. It is complimentary to and integrated with Java. JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform.



**6. SQLite3:**



SQLite is an in-process library that implements a [self-contained](https://www.sqlite.org/selfcontained.html), [serverless](https://www.sqlite.org/serverless.html), [zero-configuration](https://www.sqlite.org/zeroconf.html), [transactional](https://www.sqlite.org/transactional.html) SQL database engine. The code for SQLite is in the [public domain](https://www.sqlite.org/copyright.html) and is thus free for use for any purpose, commercial or private. SQLite is the [most widely deployed](https://www.sqlite.org/mostdeployed.html) database in the world with more applications than we can count, including several [high-profile projects.](https://www.sqlite.org/famous.html)

SQLite is an embedded SQL database engine. Unlike most other SQL databases, SQLite does not have a separate server process. SQLite reads and writes directly to ordinary disk files. A complete SQL database with multiple tables, indices, triggers, and views, is contained in a single disk file.

The major features of the project are as follows:

* A user must sign up to create his/her profile and save details.
* Platform provides users with variety of products to purchase belonging to different categories.
* Users can then add items to cart and checkout by providing billing and shipping details.
* Previous and current orders placed by user can be viewed with complete details in their profile.
* We also provide a feature to cancel existing orders for all users.

**Project Snapshots**

**Log in:**

**Graphical user interface, text, application

Description automatically generated**

Fig 1.1

**Sign up:**

Shape, rectangle

Description automatically generated

Fig 1.2

**Home Page:**

**Graphical user interface, website

Description automatically generated**

Fig 1.3

**Product Details:**

**Graphical user interface

Description automatically generated**

Fig 1.4

**User Profile Editing with account deactivation:**

**Graphical user interface, text

Description automatically generated**

Fig 1.5

**Shopping Cart:**

**Graphical user interface, text, email

Description automatically generated**

Fig 1.6

**New Order/Checkout:**

**Chart

Description automatically generated with low confidence**

Fig 1.7

**Previous and Current Order Details:**

**Graphical user interface, text

Description automatically generated**

Fig 1.8

**Code Snippets**

**Gemfile for project:**

**A screenshot of a computer

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Fig 1.9

**Home Page view:**

**A screenshot of a computer

Description automatically generated with medium confidence**

Fig 2.0

**Product Controller:**

**Text

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Fig 2.1

**Cart model:**

**A screenshot of a computer

Description automatically generated**

Fig 2.2

**Internship Details**

My internship at Deqode, Indore started on 3rd January 2022. I have been assigned the role of Solution Engineer Trainee in Backend II (RoR Development) department for which I learned about the full stack framework Ruby on Rails (RoR) which included the following:

1. Installing Rails

2. Creating an application using Ruby on Rails language

3. Getting your application connected to a database

4. Rails philosophy and guiding principles: DRY (Don’t repeat yourself), RESTful, convention over configuration, CRUD, etc.

* DRY. "Every piece of knowledge must have a single, unambiguous, authoritative representation within a system" by employing the DRY principle, developers don’t have to write the same code repeatedly, and you achieve standardization.
* Convention over configuration. This is a paradigm geared toward increasing productivity by adhering to coding conventions and the best way of doing things.
* CRUD stands for Create, Read, Update, Delete. It is a function that guides actions on databases.
* REST, short for Representational State Transfer, guides actions performed on URLs.

5. Layout of applications created with Rails

Before starting to work on the project I was also trained in Linux commands along with version control systems: GitHub and GitLab.

Some terminologies and operations I learned are –

* Fork – for creating a clone of the project on our personal repository which is in sync with the original project so that all of changes made in the original repository are automatically updated/synced with the fork repository.
* Branch – It can be said as a workplace where we add your work into the project and after reviewing it is merged to the project main branch.
* PR (Pull request) – It is a request made to the project lead or the reviewers to let them know that changes made by us are now ready to be merged in main project branch, so that they can review the work and apply changes we made into main project.
* Merge Conflicts – Resolving merge conflicts is a common practice that I learned since multiple branches exist for different functionalities/features of project from multiple developers working together.

**Current Project – Farmgirl Flowers**

I’m currently a part of ongoing RoR project at Deqode called ‘Farmgirl Flowers’ which is a shopping portal for flowers and add-ons based in USA.

Our team makes sure that customers have seamless experience in checking the status of the products, orders and getting it delivered anywhere they want.

My role as a Solution Engineer Trainee on this project involves providing solutions for issues raised by clients or newly added features along with their implementation by collaborating with the team.

This project has given me a better understanding of RoR along with the experience of working on a live project with a team of developers.

Website Link: <https://farmgirlflowers.com/>

**Home Page:**

Graphical user interface, map

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Fig 2.3

**Product Display Page (PDP):**

Graphical user interface, text, website

Description automatically generated

Fig 2.4