



**Proposal**  
**For**  
**Module Project**  
**CFS302: DevOps and Automation for Development**  
**Bachelor of Science in Computer Science**  
**Specialization in AI and Data Science Development**

**Himalayan Hues**

**Submitted by**

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## **Read carefully before filling the form.**

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.
2. Guidance notes in various fields should not be deleted.
3. Required information should be duly filled in the specified fields.

## **Guidelines and Forms**

### **Submission Procedure**

Duly filled proposal forms completed in all respects should be submitted in the form of a soft copy in the VLE. On receipt of the applications the proposals will be evaluated by the examiner and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the examiner's recommendations.

**For further information, please contact:**

Module Coordinator

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## Table of Contents

Description #	Page
<b>Note:</b> To update the table of contents, right click in the table and select ' <i>update field</i> ' and then select ' <i>Update Entire Table</i> '	
<b>1. Project Identification</b>	<b>1</b>
1.1 Reference Number:	1
1.2 Problem statement	1
1.3 Project Title:	1
1.4 Key Words:	1
1.5 Module Tutor:	1
1.6 Project Duration	2
<b>2. Aims, Goals, Objectives and scope of the Project</b>	<b>2</b>
2.1 Aims of the Project:	2
2.2 Goals of the Project:	2
2.3 Objectives of the Project:	2
2.4 Scope of the Project:	2
<b>3 Project features</b>	<b>3</b>
3.1 Background	3
3.2 Literature Review:	3
3.3 Requirements	3
3.4 Technology	3
3.5 System Architecture	3
3.5.1 System Design	3
3.5.2 Workflow	4
3.6 Deployment	5
<b>4 Team Members Role</b>	<b>6</b>
<b>5. Examiner Comments</b>	<b>8</b>
<b>6. Project Schedule / Milestone Chart /Work plan</b>	<b>10</b>
<b>7. Bibliography</b>	<b>11</b>

# Application for the Project

## 1. Project Identification

<b>1.1 Reference Number:</b> <b>AI and Data Science_CFS302_01(Specialization_Module_groupNo)</b>  (for office use only)
<b>1.2 Problem statement</b> <i>(Please refer <a href="#">here</a> on how to write a problem statement.)</i>  Cultivating Socioeconomic Growth and Cultural Preservation in Bhutan Through 'Himalayan Hues' an Innovative E-Commerce Solution Bridging Artisans with Ethical Consumers.
<b>1.3 Project Title:</b>  <i>(Provide a concise, accurate and informative title which immediately orientates your reader to the focus of your project.)</i>  Himalayan Hues: “Your Gateway to Bhutanese Dress Traditions”
<b>1.4 Key Words:</b> <i>(Please provide a maximum of 5 key words that describe the project. The key words will be incorporated in our database.)</i>  Empowerment Preservation E-Commerce Traditional Crafts Payment
<b>1.5 Module Tutor:</b>  Name: _____

Designation:		
Mobile # :	Tel. # :	
Email:		

### 1.6 Project Duration:

Starting Date: 17/08/2023

Completion Date: 10/11/2023

## 2. Aims, Goals, Objectives and scope of the Project

### 2.1 Aims of the Project:

Develop a scalable website that can benefit local artisans by providing a sustainable e-commerce platform to showcase their crafts and preserve cultural heritage.

### 2.2 Goals of the Project:

The goal of this project is to empower local artisans in Bhutan by providing them a sustainable platform to showcase and sell their traditional crafts, thereby enhancing their economic prospects and preserving and promoting cultural heritage.

### 2.3 Objectives of the Project:

- To develop a fully functional and responsive website.
- To meet end user's requirements.
- To improve efficiency and effectiveness of ordering items.
- To make e-commerce services convenient to both buyers and sellers.

### 2.4 Scope of the Project:

#### System scope:

In order to use this application, users must login using valid login information. There are three users:

1. Admin
  - Login: The admin must login using valid credentials in order to access the website.
  - Delete Users
2. Buyer
  - Register: The buyer must first register to use this website.
  - Order: The users will be able to order products.
  - Add product to cart.
  - Remove from cart.

- Payments
- 3. Sellers
  - Register: The seller must first register to use this website.
  - Add product to catalog.
  - Edit product
  - Delete Product

#### **User scope**

The end users of the web application are customers within Bhutan.

### **3 Project features**

#### **3.1 Background**

*(Explains why you are doing the project. It provides a brief overview of the background to the project and establishes a particular area, or problem, that needs to be investigated further. It provides a clear statement of the topic of the proposed work.)*

It is crucial to protect cultural heritage in today's linked world. Bhutan, which is renowned for its rich history, vivacious traditions, and fine crafts, has an abundance of culture that is ready to be shared with the world. By developing an online marketplace for displaying and trading Bhutanese traditional goods and handicrafts, the merging of technology and e-commerce offers an unrivaled potential to support, protect, and economically empower local artisans and craftsmen.

Himalayan Hues, a proposed e-commerce site, intends to offer a specialized online market that connects artisans, craftspeople, and customers in Bhutan. This website will provide a virtual storefront for Bhutanese handicrafts and traditional goods, enabling regional craftspeople to display their works and interact with buyers eager to acquire and appreciate genuine Bhutanese treasures.

#### **3.2 Literature Review:**

*(Detailed review of what all has been done internationally in the proposed area quoting references and bibliography. This section demonstrates the evolution of Technology, the depth of the project team literature search and builds the confidence of the evaluators about capability of the team in achieving the stated objectives.)*

This literature review examines the relevance, difficulties, and opportunities of e-commerce websites featuring Bhutanese traditional clothing and handicrafts in the domestic market, highlighting the digital shift in the retail sector and it also includes other similar existing websites.

Bhutan's rich cultural heritage and traditions are reflected in its traditional clothing and handicrafts. These goods are extremely valuable, not only to



Bhutanese people but also to others who want to learn about and appreciate Bhutan's distinctive culture. The preservation and promotion of Bhutanese traditions is greatly helped by e-commerce businesses that specialize in these goods, allowing for more access and appreciation.

Local artisans and craftsmen have a forum to present their talents and originality to a global audience thanks to e-commerce websites that specialize on Bhutanese national items. In addition to improving their lives, this exposure cultivates an entrepreneurial spirit and promotes product diversification and creativity.

There are still a number of difficulties in Bhutan's e-commerce environment. For both buyers and sellers, the low internet penetration, particularly in rural regions, presents a challenge. To ensure the continued development of e-commerce platforms, problems with payment gateways, logistics, and trust in online transactions. Despite those disadvantages Bhutan have some successful e-commerce related websites. The websites includes:

- Zala.bt

Zala.bt is a pioneering e-commerce shopping destination in Bhutan that is accessible through an offline location, an online portal, and a mobile app. With a diverse product portfolio that includes electronics, IT equipment, groceries, hardware tools, pet care, home appliances, automobile accessories, baby products, fashion, Bhutan lottery, and Made in Bhutan products, the way they operate currently reaches over 99 registered stores across the entire nation.

It all started with aBit Private Limited, an eight-year-old IT company situated in Thimphu that offered comprehensive IT solutions and services to different industries. Zala.bt was one of many such projects on which the software division was currently engaged. On July 6, 2020, Zala.bt was introduced following nearly two years of rigorous market research. a brand-new e-commerce platform created to make it easier to sell different things online.

- Druksell.bt

Druksell intended to introduce the world to the exquisite craftsmanship and inventiveness of Bhutanese craftspeople.

In the past, those who wanted to purchase Bhutan's distinctive goods could only expect to visit there - while forking over a hefty duty! - to wear the colorful, eye-catching textiles, smell its sacred incense, or read and learn from its distinctive tales.

On the other hand, producers and artists could only wish that you would visit Bhutan. There are now very few, if any, foreign outlets available to the typical Bhutanese producer. Bhutan by itself provides little to artisans wanting to make

a life doing what they love because of its small domestic market (about 700,000 people), the majority of whom are smallholder farmers.

- RAOOnline.ch

RAOnline is a private and non-profit website based in Switzerland. RAOline is politically independent. RAOOnline is not working as a travel agency. The website was established in March 2000. RAOOnline's mission is to promote Nepalese, Bhutanese and Swiss tourism. They provide more than 22,000 pages on Switzerland, Bhutan, Nepal and educational subjects.

The pages on Nepal and Bhutan are mostly written in english. The educational cooking pages are written in german. It provides multiple information on various cultures, which include national languages, glossaries, pilgrims, dresses, music, festivals, movies, etc.

### **3.3 Requirements**

Functional requirements:

- Users login:  
The Sellers who can update, delete and edit the information provided will have to login.  
The buyers who can add to cart or order the items also need to login.  
And the admin who can view the users(Buyers and Sellers) information or delete the users if needed shall also login.
- Add product:  
The sellers can add a product to the catalog on the respective date and some description on that product.
- Update product:  
If there is change of plans with the price and size of the product then, the seller can update the information.
- Delete product:  
The products that are canceled can be deleted by the sellers. The feature like adding, updating and deleting products can only be done by the sellers.
- User registration:  
The users(both buyers and sellers) need to register using their email ID in order to access the information.
- View products:  
The buyer can view the product information.
- Ordering/ adding to cart:

The buyer can add to cart or order the products.

- **Payments:**

After buyers are done with their ordering, they process with the payment and shall add the journal number .

- **Log out:**

The users and the admin can log out of their account once they finish using it.

Non-functional requirements:

- **Responsive** - Can automatically adjust the screen size when an application is accessed on different devices.
- **User friendly** - simple user of instructions, icons and error messages.
- **Scalability** - ability to scale up the number of users as user's increase.
- **Better UI quality** - The UI of the website will have application of color theory and interactive designs to let users indulge themselves.

### **3.4 Technology**

#### **Software specifications**

- ✓ Visual Studio Code
- ✓ Node JS
- ✓ Docker
- ✓ Git
- ✓ Jenkins
- ✓ Google Chrome

#### **Hardware specifications**

- ✓ Laptop: RAM  $\geq$  8GB
- ✓ 64-bit Windows OS
- ✓ Core processor:  $\geq$  i3

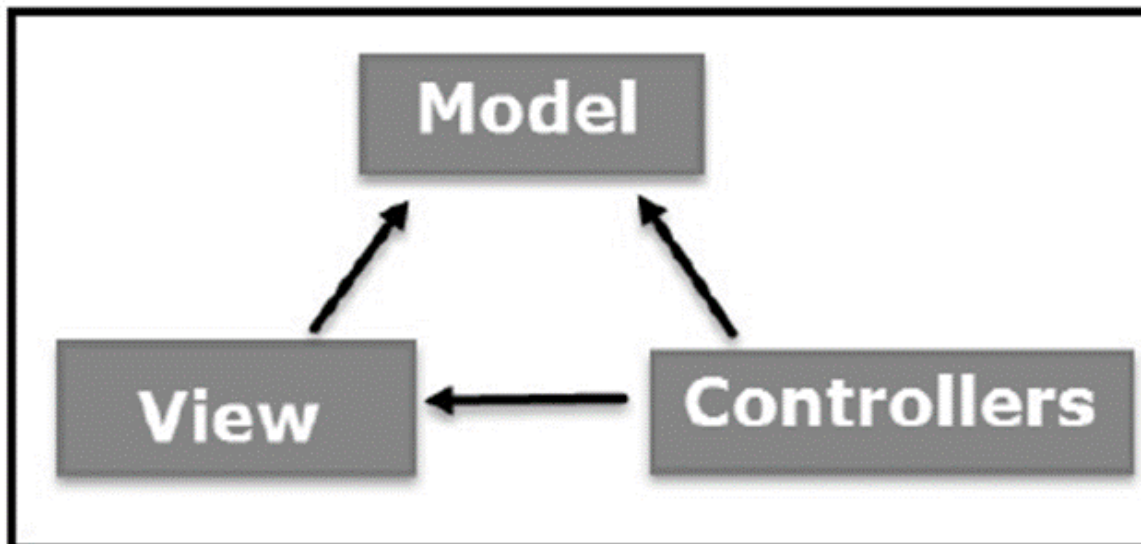
### **3.5 System Architecture**

### 3.5.1 System Design

The **Model-View-Controller (MVC)** is an architectural pattern that separates an application into three main logical components: the **model**, the view, and the controller. Each of these components are built to handle specific development aspects of an application. MVC is one of the most frequently used industry-standard web development frameworks to create scalable and extensible projects.

#### MVC Components

Following are the components of MVC –



#### Model

The Model component corresponds to all the data-related logic that the user works with. This can represent either the data that is being transferred between the View and Controller components or any other business logic-related data. For example, a Customer object will retrieve the customer information from the database, manipulate it and update its data back to the database or use it to render data.

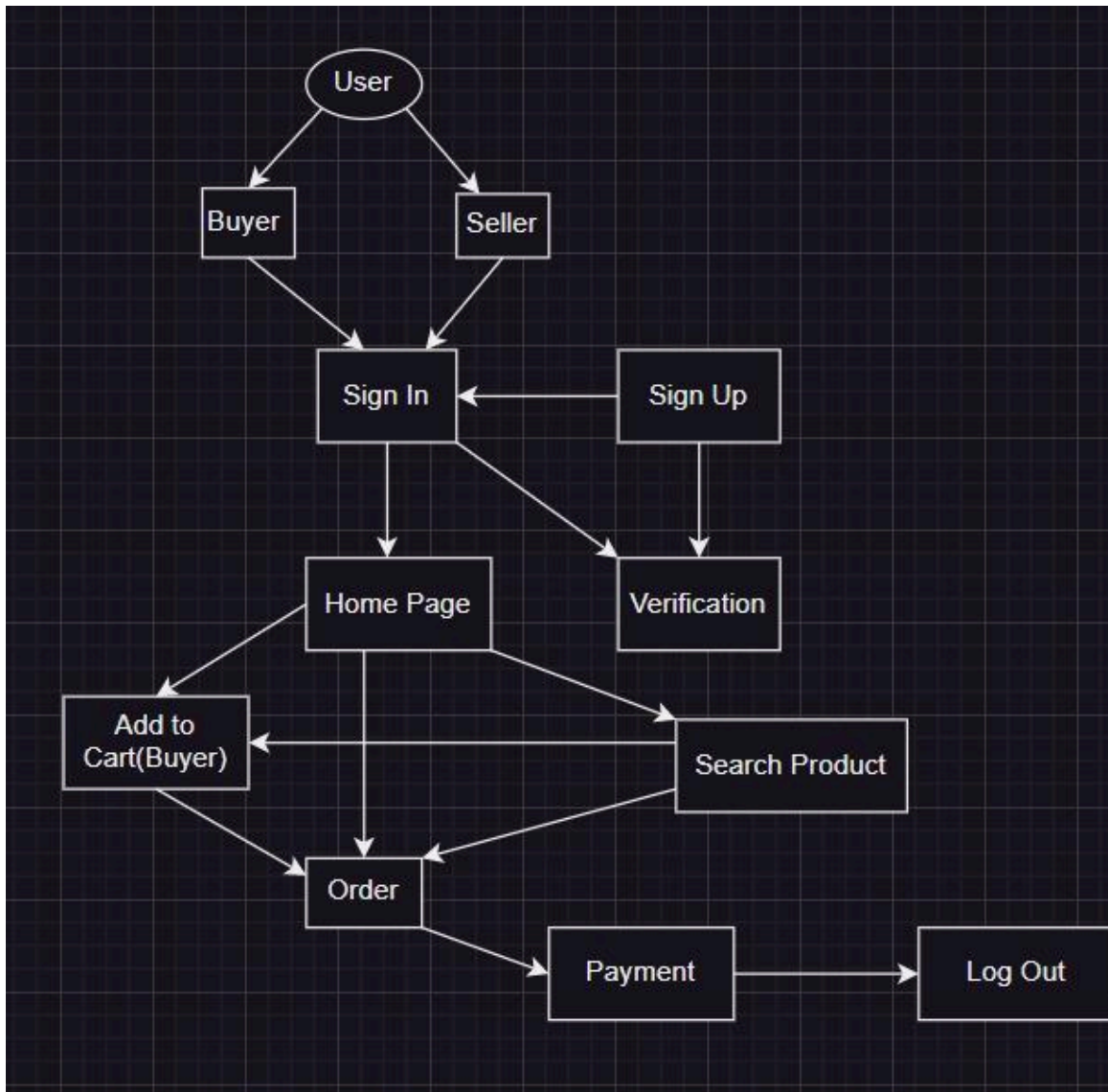
#### View

The View component is used for all the UI logic of the application. For example, the Customer view will include all the UI components such as text boxes, dropdowns, etc. that the final user interacts with.

#### Controller

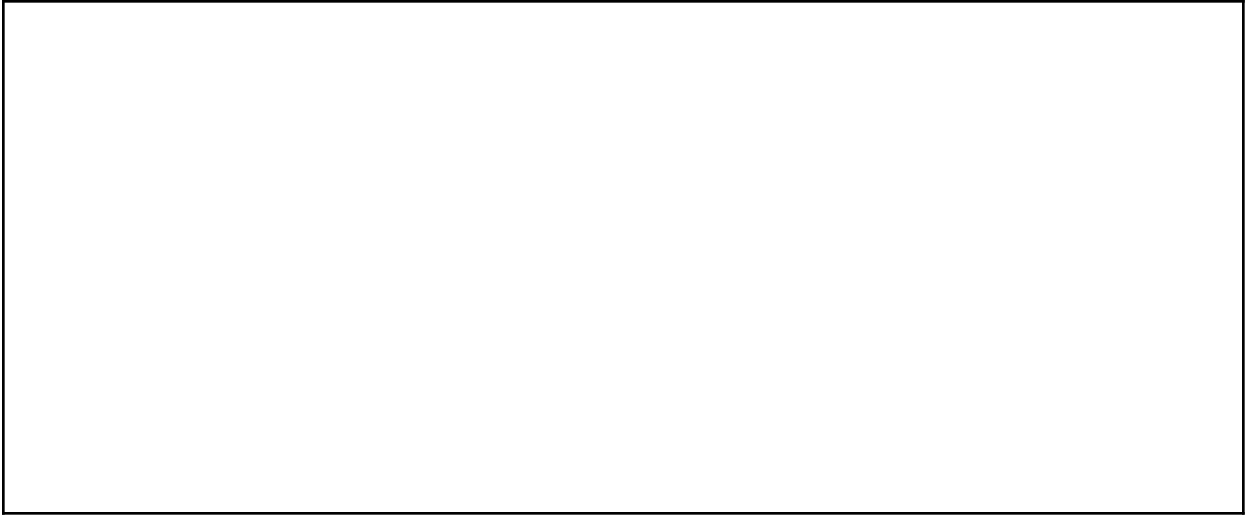
Controllers act as an interface between Model and View components to process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output. For example, the Customer controller will handle all the interactions and inputs from the Customer View and update the database using the Customer Model. The same controller will be used to view the Customer data.

### 3.5.2 Workflow



### 3.6 Deployment

-Any free web server that provide the services



## **4 Team Members Role**

### **4.1 Member 1 Name and Role**

**Bidash Gurung**

### **4.2 Member 2 Name and Role**

**Jigme Wangyel Wangchuk**

### **4.3 Member 3 Name and Role**

**Pema Chozom**

### **4.4 Member 4 Name and Role**

**Deepak Ghalley**





## 5. Examiner Comments

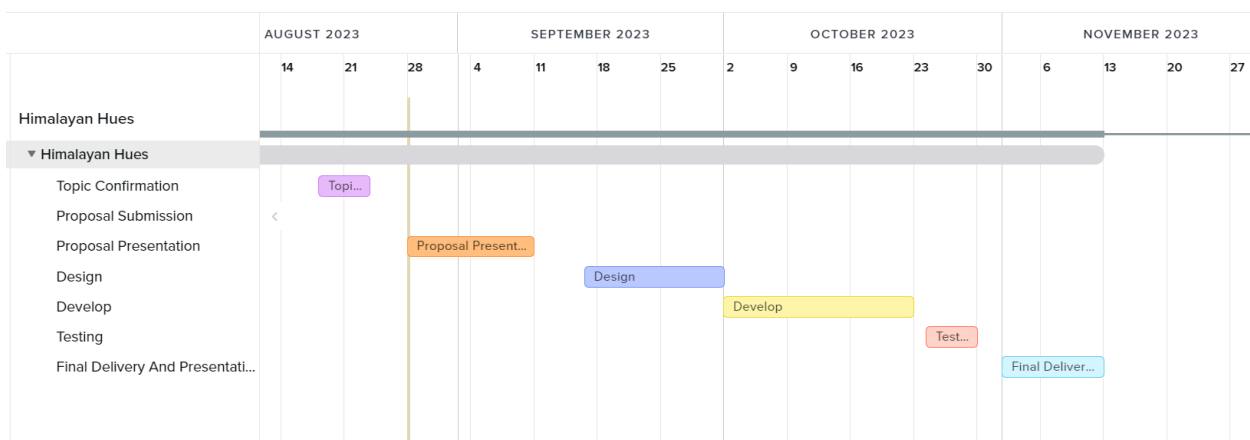


## 6. Project Schedule / Milestone Chart /Work plan

*[describes what you will do. It is a plan of the tasks which will enable you to achieve the stated aims of your project. To devise a plan, you need to break the project down into a series of steps or stages, and you then outline the tasks within each stage. The project plan should also include a timetable in which you plan the timing for the main tasks. This timetable can help to keep you on track throughout the project. The plan may also include a list of the resources required to do the project.]*

*(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)*

SI no	Start Date	Finish Date	Deliverable
1	17/08/2023	22/08/2023	Project Confirmation
2	27/08/2023	27/08/2023	Proposal Submission
3	28/08/2023	09/09/2023	Proposal Presentation
4	15/09/2023	30/09/2023	Design
5	01/09/2023	20/10/2023	Develop
6	24/10/2023	30/10/2023	Testing
7	01/11/2023	10/11/2023	Final delivery and Presentation



## 7. Bibliography

RAOnline. (n.d.). *RAOnline Bhutan: Culture - archery, architecture, ceremonies, national dress, dzongs, festivals, languages, music, monasteries, museums, religion.*

RAOnline. [https://www.raonline.ch/pages/bt/visin/bt\\_cult01.html](https://www.raonline.ch/pages/bt/visin/bt_cult01.html)

*zala.bt - The best online shopping in Bhutan.* (n.d.-b). <https://zala.bt/>

*ABOUT US.* (n.d.). *druksell.bt.* <https://druksell.bt/pages/about-us>