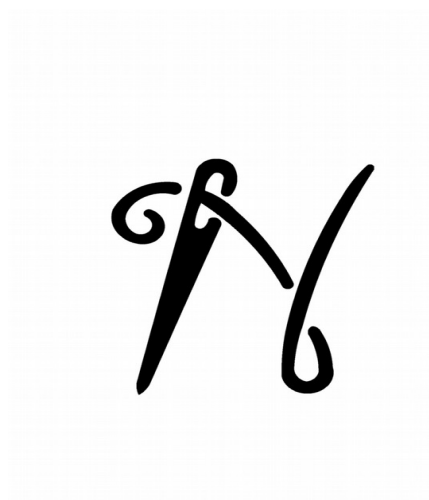# Herfa

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Track:
    Open Source Application Development

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1. Introduction

   "It is fairy dust and wanderlust that guide our hands to create what our hearts desire."
— **Gayle Wray**
let's modify this quote a little bit and say "to create, do and learn what our hearts desire". This is the core idea behind Herfa website. It is the right place if you want to learn any type of handcrafts, know places to buy the needed materials for whatever crafting you intend to do.

1.1 Background

   The idea behind Herfa was originated when one of the team member faced the problem of looking for a place where she wanted to learn carpentering, but she did not find a place, after a while she knew that there are a lot of places that can teach you lots of crafting.

   Many of the students of faculty of Fine Arts look for places where they can buy certain products for their projects and work. It takes a lot of time looking for the proper place.

   Many other people learn or already creating things or wanting to give courses but the do not know if what they are doing or looking for shall be received by the intended ones.

1.2 Purpose

   Herfa's purpose is to make life easier for its users. If user is investor then he/she would be so sure that his/her products, courses or events will reach the interested buyer. So that the investor and buyer are fully connected.

   As for normal user he/she will be able to spot his/her need immediately according to his/her subscriptions or by performing a simple search.

1.3 Competitors' Analysis

   A search was conducted about how to reach a place where you can learn a handcraft
profession.

   Some websites like SkillShare, it is a website where user enroll can follow a certain skill like
sewing, jewelry design ...etc and it displays lots of online courses and after compilation students
make a project to make sure the now have the skill.
(https://www.skillshare.com/browse/crafts)
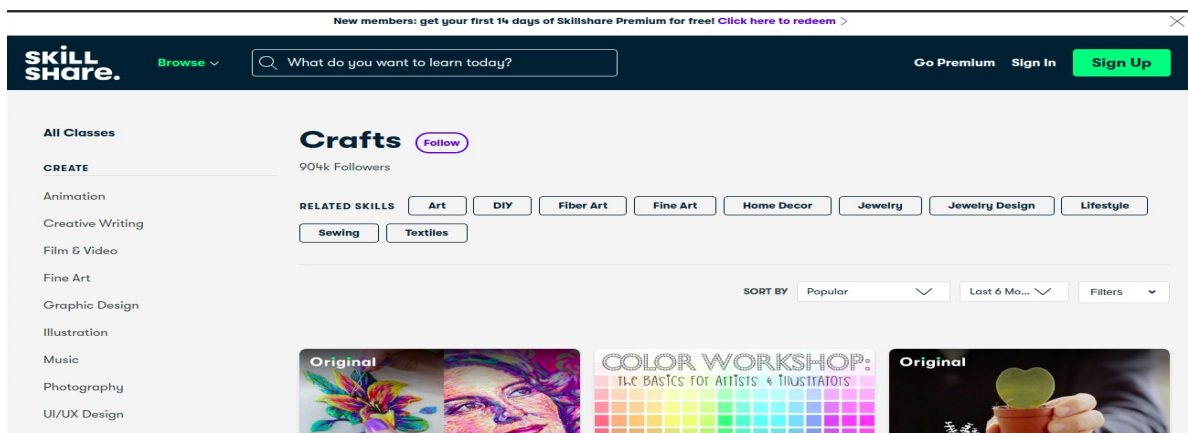
(Fig.1.3.1 Display the crafts page from SkillShare website)

   Creativelive website also interested in crafts by giving them courses about lots of crafts.
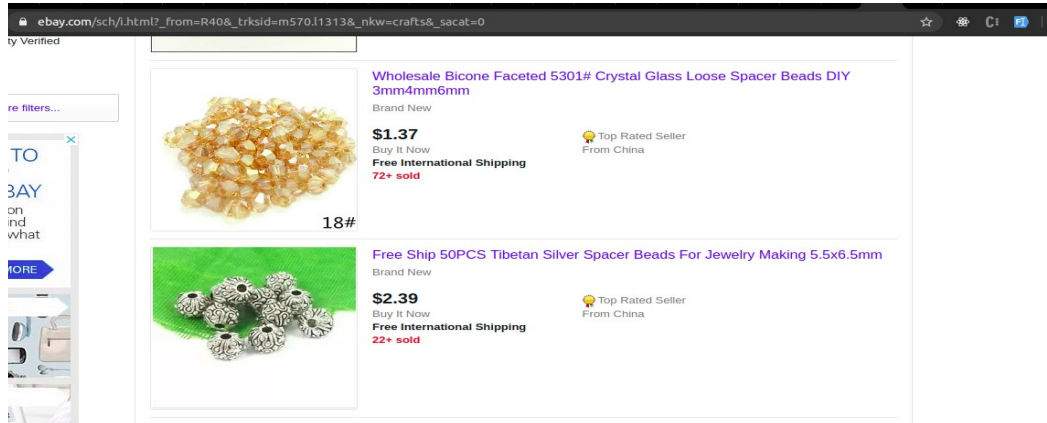(https://www.creativelive.com/craft)

(Fig.1.3.2 Displayin the trending courses from Creativelive website)

And other websites like ebey where you can buy products.

(https://www.ebay.com/)

(Fig1.3.3

Displaying products from ebey website)

Beside these websites it was found that people tend to use Facebook groups, where people ask how to do something or where to buy something ex "Craftsmen الحرفيـون الهـواة" group on Facebook.

(Fig.1.3.4 Asking where to buy motor)

Also lots of crafts makers advertise their work on Facebook pages, groups or their own account.

(Fig.1.3.5 Displaying products in facebook groups and pages)

What makes Herfa different that the user can perform many tasks from one place. So Herfa made life easier for interested parties.

1.4 Customers' Analysis

A survey has been done where people were asked about what's their opinion about the website, will they use such a website, what are the things they need and look for.

Some people had interacted with the idea and encourage the topic they even left ways of communication. The survey was conducted in two languages Arabic and English, the reason was to seek many opinions from different people with different culture.
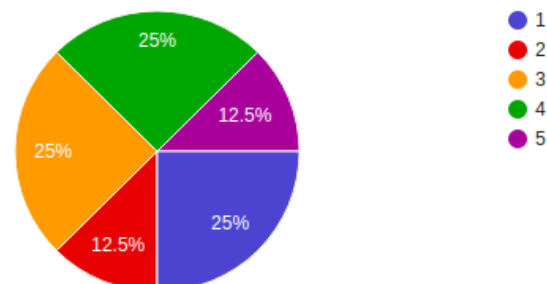
مدي سهولة انك تلاقي الماتريال اللازمة (١ سهل جدا -5 صعب جدا)

68 responses
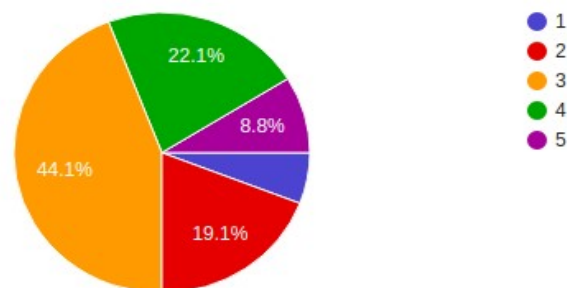
how easy is it to find a place that sells the needed material (1 very easy - 5 very hard)

8 responses

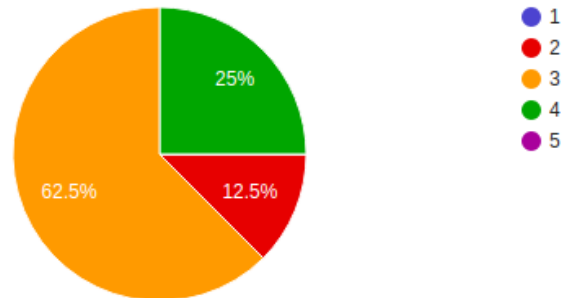(Fig.1.4.1 percentage of easiness of finding materials)

how easy is it to find a place to learn whatever you want (1 very easy - 5 very hard)

8 responses

- 1
- 2
- 3
- 4
- 5

25%

12.5%

62.5%

لما بتحب تتعلم حرفة او حاجة جديدة مدي سهولة انك تلاقي مكان (١ سهل جدا -5 صعب جدا)

68 responses

- 1
- 2
- 3
- 4
- 5

27.9%

16.2%

8.8%

44.1%
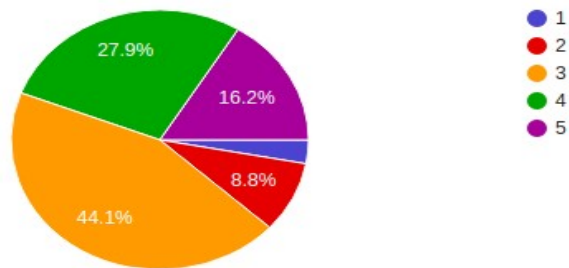
(Fig.1.4.2 percentage of easiness of finding places to learn)

what is the profession you want to know about the most like(sewing, fashion designing, makeup...etc)

8 responses

Sewing

Fashion designing

Fashion designing

Crochet

makeup

Handmade decor

jewelery design

ايه اكتر حرفةحابب انك تتعلمها (مثال: خياطة - نجارة...)

68 responses

(Fig.1.4.3 The most wanted handcrafts)

(Fig.1.4.4 Sample of what people want or expect from the website)
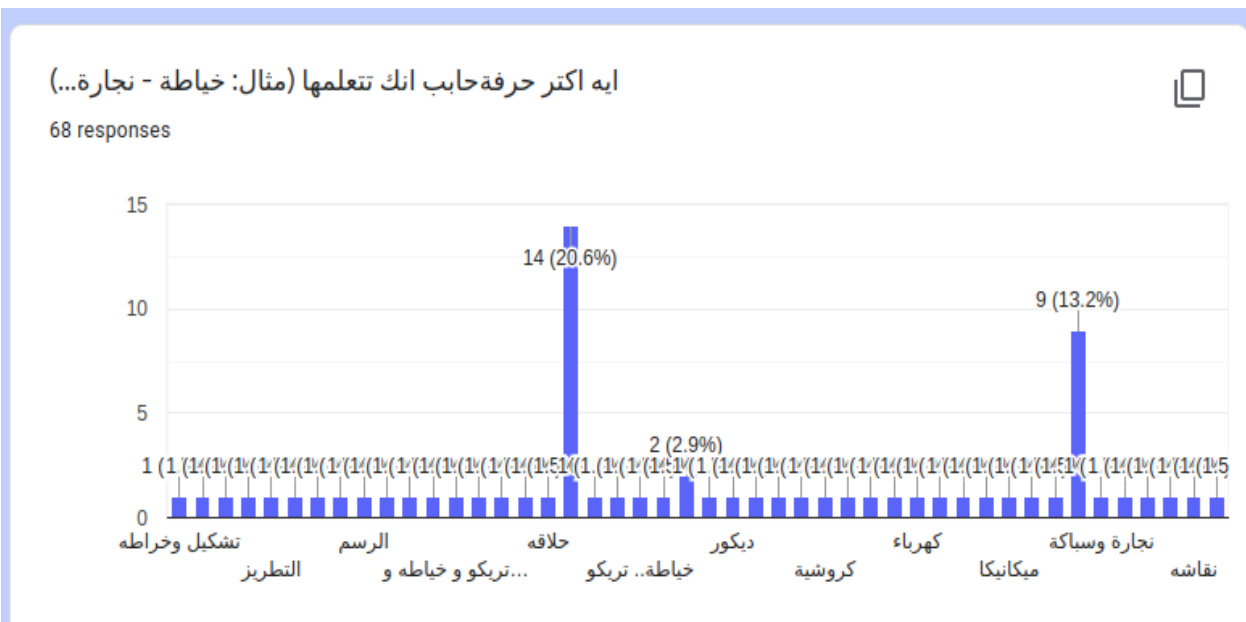
1.5 Scope

   The scope of the website is any craft maker who has a place or workshop and wants to give interested people courses or training or he/she wants to market their work.
As well as, any seller who may have a place to sell his products or may not and works online.

   Also anyone interested in learning to improve a skill or to do something they like or to learn crafting to have it as their profession.

1.6 Stakeholders
   Everyone who is looking for a place to learn or a product to buy will take benefits of the website, as well as everyone who is having a place and give courses or has a workshop and needs people to learn and practice will now find them easily not only find people to take courses and workshops, he/she can also market and advertise their products and places.

1.7 Business Model

Herfa's business model is a combination of two business models, which are Peer-to-Peer Business Model and User Based Communities.

Peer-to-Peer Business, as per this model, Herfa acts as a middleman between two individual parties and create value for both demand and supply side. And User Based Communities, as Herfa is a platform where users can communicate on their own and advertise their things at the same time.
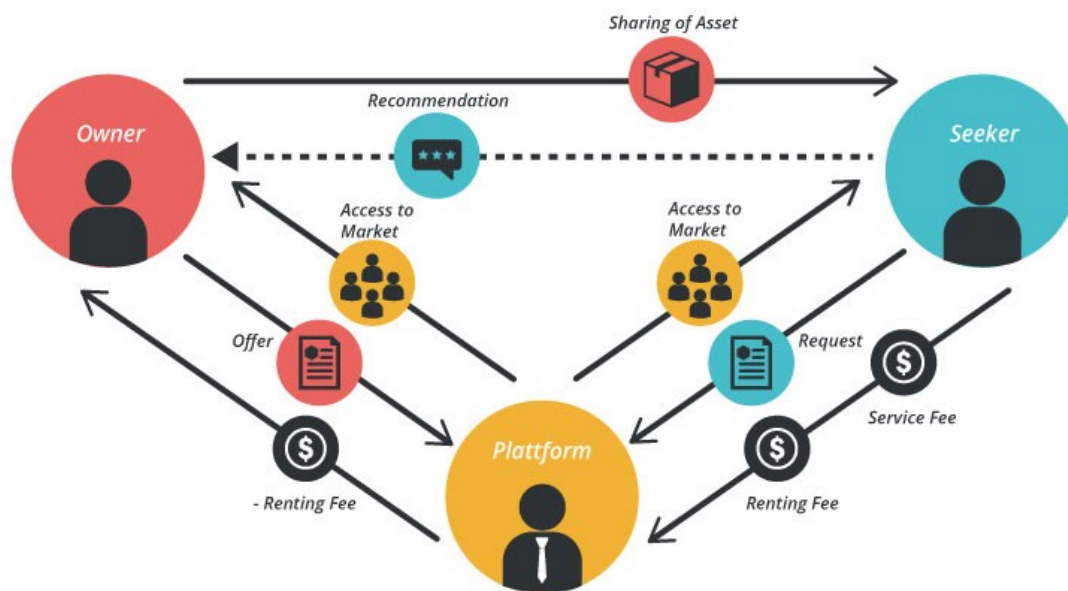
(Fig.1.7.1 Peer-to-Peer Diagram)

2. Requirements

2.1 User Functional Requirements

2.1.1 Authentication and Authorization

User is authenticated before being logged in the system so the admin can have full management over the system. And user is authorized inside the system to know what he/she can do in the system.

2.1.2 Dashboard

A dashboard for investors and admins to be able to manage the site for admins or the courses, products or events for investors.

2.1.3 Navigation

User can easily navigate in the website to view different pages like the post creation and manipulation page. Page to view courses, other pages for events and products, one to subscribe/unsubscribe a category.

2.1.4 Showing Places

To be able to find a place over google maps.

2.1.5 Perform Search

To be able to perform search over the website to reach the result he/she is seeking.
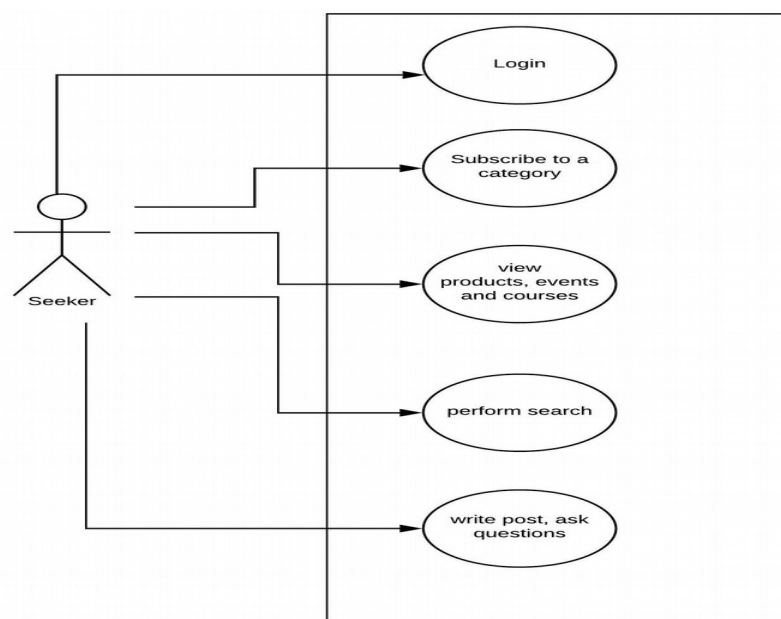
2.2 Use Cases

2.2.1 Actors

The system has 3 actors admin, investor and seeker. The admin has full privilege over the system and can manipulate almost every thing. The investor responsible for his own dashboard where he/she can manipulate his/her own products, courses and events.

Finally, seeker the one who seeks products or courses wants to know the latest events. Subscribe in a category and get to know the latest updates about that category.
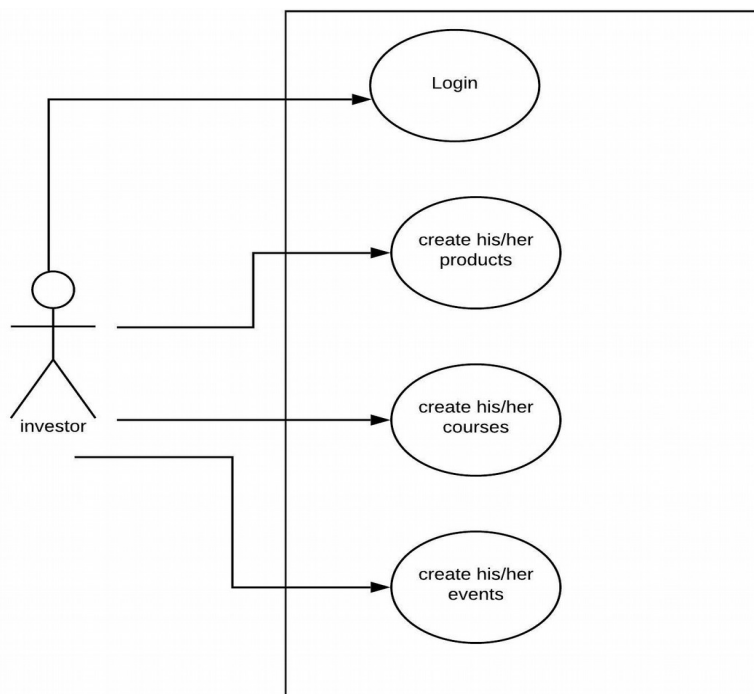
2.2.2 List of Use Cases

1) Seeker seeks products

2) Seeker seeks Course

3) Seeker asks a question

4) Seeker subscribe/unsubscribe to a category

5) Seeker perform search

6) Investor offer products

7) Investor offer workshop/courses

8) Investor create events

2.2.2 Use Cases Diagram

(Fig.2.2.2.1 Seeker Use Cases Diagram)

(Fig.2.2.2.2 Investor Use Cases Diagram)

2.3 Classes

2.3.1 List of Classes

1. User
2. Category
3. Product
4. Event
5. Course
6. Interest
7. Bookmark
8. Review_Rate

2.4 Non-Functional Requirements

- Security, we have tended to secure our website. We have secured the Back-end and the Front-end. Back-end through passport package and validation of each request and Front-end through form validation of every input.
- Lazy loading, it is used in angular to load the site quickly and load the components when needed.
- Simplicity, it helps user and makes him/her more comfortable dealing with the website.
- Accuracy
- Adaptability
- Using Open Source Technologies
- Capacity
- Availability
- Reliability
- Recover-ability
- Maintainability
- Serviceability

3. Objectives

Herfa's objective is to be an aid to any young or starting investor. It will be like a shop or workshop for him/her and a starting point. As well as, investor who seeks a certain type of users, Herfa will make it easier for them.

It will also add benefits to any seeker, as you will find a platform where he/she will have all what he/she is looking for.

To fulfill these objectives the team worked according to the following criteria:

- A member responsible for user authentication and authorization in the backend as well as frontend.
- Another one was responsible for user crud over posts and comments, and category subscriptions in the backend and frontend.
- One for the dashboard design, course and category crud.
- One for the whole site design and events, products crud.
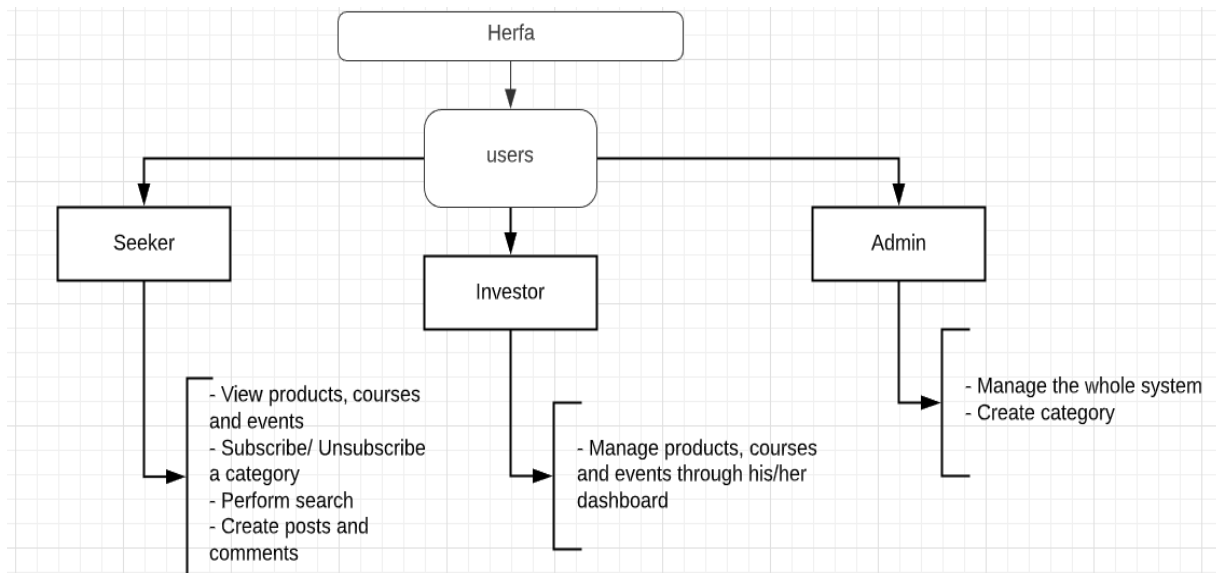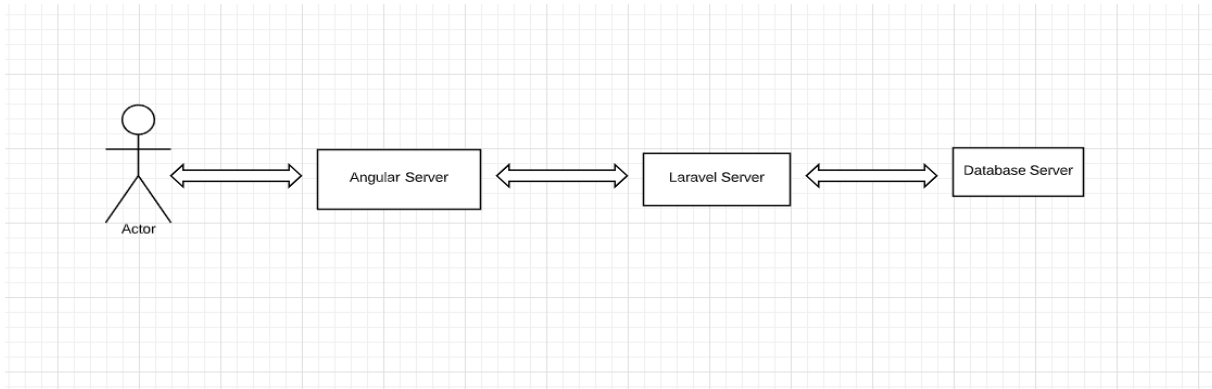
4. Design Overview

4.1 System Architecture
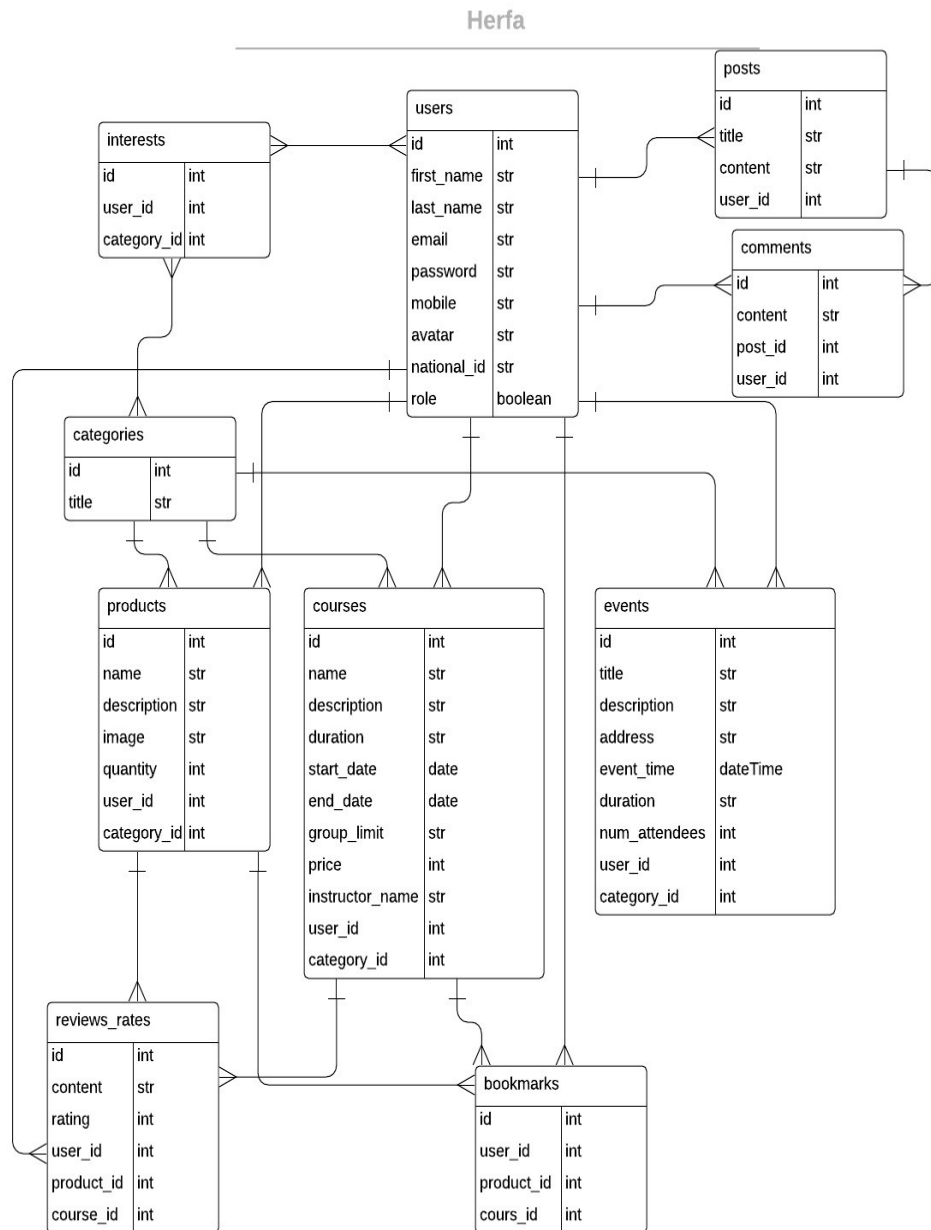
The system is working according to MVC design.
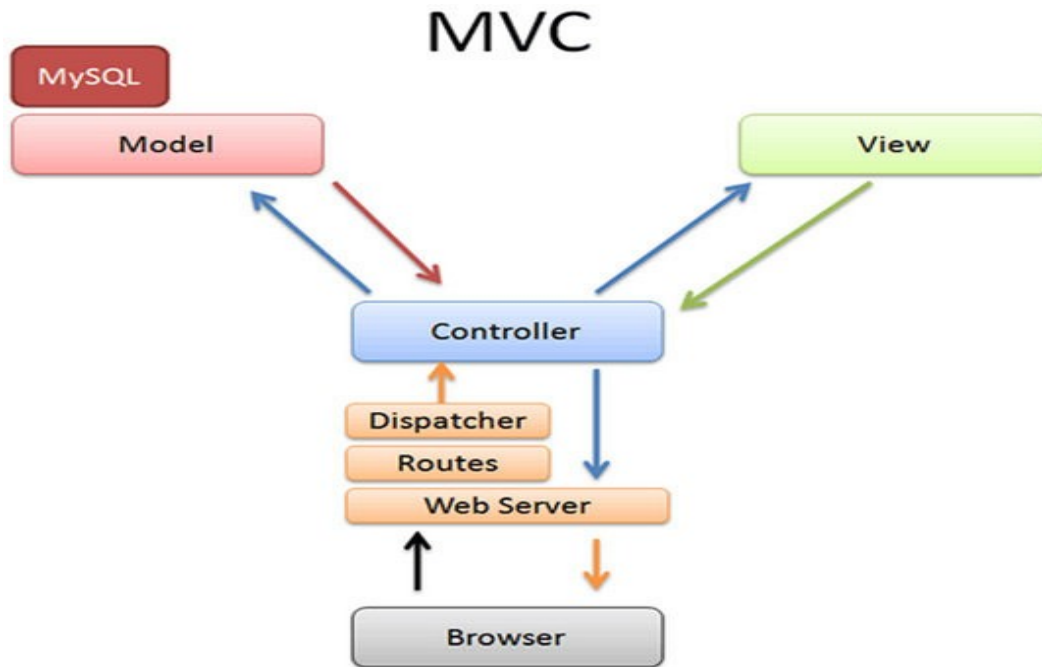
(Fig.4.1.1 MVC)

(Fig.4.1.2 system architecture)

4.2 Data Design

Herfa

(Fig.4.2.1 Entity Relationship Diagram)

5. Implementation

5.1 Technologies

    Herfa is working upon 3 main technologies which are:

- Laravel APIs: act as the end point to every request and security level to database.

- MySQL DB: the main database.

- Angular: responsible for user interactions with the website.

5.2 Hardware Requirements

    The expected number of user is 1000 user accordingly we will need:

- 200 GB Hard Disk
- 8 CPU cores
- 16 GB Ram

5.3 Steps of Installation

To install Herfa locally the following is needed:
 - BackEnd
- MySQL up and running
- create database
- composer installed
- laravel installed
- run composer install commend
- in .env file change database configuration
- run php artisan migrate command
- run php artisan passport:install
- run php artisan serve

- FrontEnd
  - installed NodeJS
  - installed NPM
  - installed Angular globally
  - run npm install
  - run ng serve

6. User/Costumer Testing

6.1 Users/Costumers Feedback

   Herfa was tested by costumers who are interested in learning handcrafts and manual professions. And they submit their feedback as what will be shown below. They liked the existing features and asked for some enhancements which are in the website future plans to be released.
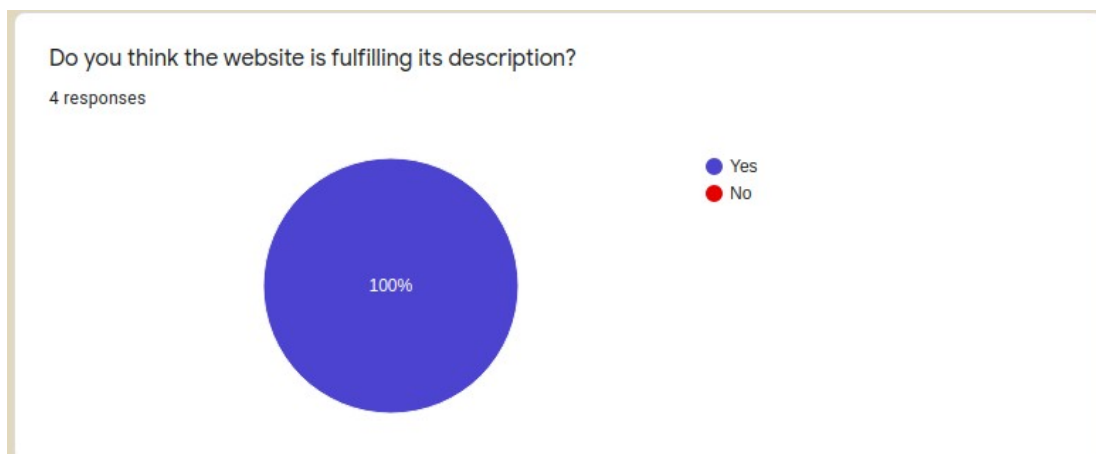
(Fig.6.1.1 Fulfillment of Website Description)

(Fig.6.1.2 The Distinct Features)

(Fig.6.1.3 Dislikes)

(Fig.6.1.4 Improvements)

7. Recommendations/ Future Work

Herfa is a needed website and it needs so many features in order to improve its services. So, the plans are settled for the website to flourish and meet its users needs and cover lots and lots of services. Our first release is now done and functions properly.

The intended features to be added in the second release are as follow:
- Adding Chat in order to make the communication easier among users.
- Increase the number of categories in order to increase the number of users on both sides(seekers and investors).
- To add videos.

The intended features to be added in the third release are as follow:
- The ability to buy/sell products online.
- To be able to give the courses online over Herfa platform

8. User Guide

In the upcoming paragraph the steps that user can perform to hit a specific functionality. First, we shall consider seeker's scenarios, after that, investor's scenarios.

8.1 Seeker's Scenarios

1. Add post and comments
➔ User need to login or sign up if he/she does not have an account yet.
➔ Click on posts in the navigation bar this will redirect him/her to the posts page.
➔ Click on add post button this will redirect him/her to the post form.

→ He/ She should write the title of the post not less than 3 letters and not more than 50 letters. And the content of the post not less than 5 letters and not more than 255 letter.

→ Click button post this will redirect him/her to the posts page where posts are ordered from newest to oldest.

→ He/She can delete his/her own posts and also update them.

→ He/She can comment on any post by clicking add comment button.

→ He/she will be redirect to the form to write the comment which is not less than 5 letters and not more than 255 letters.

→ Click comment this will redirect him/her to the posts page again.

→ He/she can delete and update their own comments.

→ He/She can find pagination in the page footer to view more posts.

2. View Products

→ User need to login or sign up if he/she does not have an account yet.

→ Click on products in the navigation bar this will redirect him/her to the products page.

→ He/She can view the products on the system and all of its details.

→ He/She can go back and forth in the products through pagination.

3. View and Subscribe in Categories

→ User need to login or sign up if he/she does not have an account yet.

→ Click on categories in the navigation bar this will redirect him/her to the categories page.

→ He/She can view the categories on the system and all of its details.

→ He/She can go back and forth in the categories through pagination.

→ He/She will have the ability to subscribe or unsubscribe a category of interest.

4. View Courses

→ User need to login or sign up if he/she does not have an account yet.

→ Click on courses in the navigation bar this will redirect him/her to the courses page.

→ He/She can view the courses on the system and all of its details.

→ He/She can go back and forth in the courses through pagination.

4. View Events

➔ User need to login or sign up if he/she does not have an account yet.

➔ Click on events in the navigation bar this will redirect him/her to the events page.

➔ He/She can view the events on the system and all of its details.

➔ He/She can go back and forth in the events through pagination.

4. Search

➔ User need to login or sign up if he/she does not have an account yet.

➔ Go to search page type the intended word and all the places where this word is mentioned shall be displayed.

8.2 Investor's Scenarios

1. Courses

➔ User need to login or sign up if he/she does not have an account yet as an investor.

➔ He/She will be directed to dashboard.

➔ Click on the courses tab he/she will find a table where his/her courses exist.

➔ He/She can add new Courses by clicking on add button.

➔ After filling the form he/she will be directed to the courses page again.

➔ He/She can delete, update or view his/her courses.

➔ He/She can go back and forth in the courses through pagination.

2. Events

➔ User need to login or sign up if he/she does not have an account yet as an investor.

➔ He/She will be directed to dashboard.

➔ Click on the events tab he/she will find a table where his/her events exist.

➔ He/She can add new events by clicking on add button.

➔ After filling the form he/she will be directed to the events page again.

➔ He/She can delete, update or view his/her events.

➔ He/She can go back and forth in the events through pagination.

2. Products

➔ User need to login or sign up if he/she does not have an account yet as an investor.

➔ He/She will be directed to dashboard.

➔ Click on the products tab he/she will find a table where his/her products exist.

➔ He/She can add new products by clicking on add button.

➔ After filling the form he/she will be directed to the products page again.

➔ He/She can delete, update or view his/her products.

➔ He/She can go back and forth in the products through pagination.