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| Student Reference Number: 10707241 |



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| Module Code: ISAD254SL | Module Name: Human Computer Interaction | |
| Coursework Title: Group Assignment | | |
| Deadline Date: Saturday, 24 April 2021, 11:30 AM | | Member of staff responsible for coursework:  Ms. Pavithra Subashini |
| Programme: BSc (Hons) Software Engineering | | |
| Please note that University Academic Regulations are available under Rules and Regulations on the University website [www.plymouth.ac.uk/studenthandbook](http://www.plymouth.ac.uk/studenthandbook). | | |
| Group work: please list all names of all participants formally associated with this work and state whether the work was undertaken alone or as part of a team. Please note you may be required to identify individual responsibility for component parts.  **Group No: 21**  HS Kaushalya - 10707241 (Group Leader)  VPN Sulakshika - 10707385  PDS Sigera - 10707372  ***We confirm that we have read and understood the Plymouth University regulations relating to Assessment Offences and that we are aware of the possible penalties for any breach of these regulations. We confirm that this is the independent work of the group.***  Signed on behalf of the group: | | |
| Individual assignment: ***I confirm that I have read and understood the Plymouth University regulations relating to Assessment Offences and that I am aware of the possible penalties for any breach of these regulations. I confirm that this is my own independent work.***  Signed: | | |
| Use of translation software: failure to declare that translation software or a similar writing aid has been used will be treated as an assessment offence.  I \*have used/not used translation software.  If used, please state name of software………………………………………………………………… | | |
| **Overall mark \_\_\_\_\_% Assessors Initials \_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_** | | |

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| INTRODUCTION | |
| INTRODUCTION TO PROJECT  * “*If you think organic food is expensive, have you priced cancer lately?”* this is a good saying by Joel Salatin an American farmer, lecturer, and author. Organic food comes from a good harvest. Lately there are many food items which is made up of artificial fertilizers which might not be good for human health. Back in decades agriculture also known as farming was introduced by human between 7000 and 10000 years ago, during the Neolithic era, or the New Stone Age. Agriculture is the production of food, fiber, animal feed, and other goods by means of growing and harvesting plants and animals. * In this project we designed an agricultural information system for a farm named as “Healthy Harvest” which sells organic food items which are grown in the farm itself organically. Our web application mostly focused on the green concept as we are concerned about the nature. This web application or the website is an all-in-one site where users or the customers can buy the farms products online and make the payments either in cash or by bank payments. In the shop there are organic products that are sold. For e.g., vegetables, fruits, and diaries. Also, the new farmers can register and can sell their products via us or else they can join our team of farmers. * Here we are mostly concerned about the UX design. Because it is foremost thing which will attract our end users. Our end users are the people who buy our products and the farmers who sell and join our team of farmers. All the details, UI’s, and further information of the farm and how the application works is explained below under categorized topics. So, we plan to make this project a success with the help of all team members working in one team spirit. |  |
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| |  |  | | --- | --- | | **PROBLEM STATEMENT**   * For almost every agriculture business, marketing and advertising plays a vital role in making the agriculture business an international brand, we the Healthy Harvest. * are fully committed in slashing green to your life. * Managing a business or getting products delivered to your doorstep has always been an obstacle but with Healthy Harvest we bring this to your fingertips. * Whenever we hear the word 'farmer', they are for the most part connected with the commitment in agriculture, developing our daily crops. * In our current reality where just about 33% of the population is related with cultivating, it is vital for us to offer them the appreciation they deserve. |  | |  | |  |

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| PACT ANALYSIS | |
| WHAT IS “PACT ANALYSIS”?  * A PACT Analysis is a more detailed brief useful framework design, which is used to thinking about human centered design. * The People carry out activities in contexts using technologies is the main idea of this and this is consisting of four parts.   P PEOPLE  A ACTIVITIES  C CONTEXT  T TECHNOLOGIES    **Information & Message Changes**  **Farmer**  ACTIVITIES  PEOPLE  **Buyer** | **Socialization** |
| **Organizational**  **Social**  Communication  Input  **PACT ANALYSIS**  **CONTEXT**  **TECHNOLOGY** |
| USER PROFILES | |
| WHAT IS USER PROFILING?  * A collection of settings and information associated with a user, is user profiling. User profile is helps to specifying the terms for certain features in the system such as layout view, preferred languages, profile visibility, date format, colour themes and message display format. This helps to interactive behaviour of the user along with preferences and in associating characteristics with a user.  WHO USERS ARE?  * Farmers * Buyers  WHAT IS THE GOAL IN USING THE “HEALTHY HARVEST” WEBSITE?The goal in using the Healthy Harvest website is, can buy fresh healthy products to user, farmers can sell their products as soon as they harvest, and anyone can get more information about farmers and their products.WHAT ARE THE TASKS INVOLVED? (OBSERVE EXISTING WORK PRACTICES)?  * **To buy products**: check our shop, select an item, select a weight, call for us / add products to cart, fill information about billing address, buy. * **To check news:** go to our blog page, check our blogs with more details. * **To login to the system**: go to login page, fill all credentials, log in to the system. * **To contact us**: go to contact page, fill all details, send a message. |  |

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| TASK ANALYSIS DIAGRAMS Type Value, full name, email, phone number and Donate.  1.2.1  Home  1.0 | |
| 1.2.8.2.2  1.2.8.2.1  Click “Continue to checkout” button.  Type full name, email, address, city, state, zip, card name, credit card number, expirer month, expirer year, cvv & click check box.  1.2.4.1  1.2.7.1  Select a weight.  1.2.8.2  1.2.8.1  1.2.7.2  1.2.9.1  Type name, email, phone number, and message.  Click “Send Message” button.  Change qty & remove item.  Click “Confirm Order” button.  1.2.4.1.1  Select an item.  1.2.1.1  1.2.9.2.2  1.2.9.2.1  1.2.9.1.2  1.2.9.1.1  Sign Up with account info.  Sign In with account info.  Sign Up with account info.  Sign In with account info.  1.2.9.2  1.2.9  1.2.8  1.2.7  1.2.6  1.2.5  1.2.4  1.2.3  1.2.2  1.2  1.1  Click “Farmer Login” button.  Click “Buyer Login” button.  Healthy Harvest  About  Services  Shop  Blog  Gallery  Contact  Cart  Login  Select Appropriate Item  Open Web Application | | |
| 1.2.9.2.1.2  1.2.9.2.1.1  1.2.9.1.2.1  1.2.9.1.2.2  1.2.9.1.1.2  1.2.9.1.1.1  Click “Sign Up” button  Enter full name, house address, farm address, contact no, email, username, password.  Enter Username, Password.  Click “Sign In” button  Enter full name, house address, contact no, email, username, password.  Click “Sign Up” button  Click “Sign In” button  Enter Username, Password. | 1.2.9.2.2.2  1.2.9.2.2.1 |
| LO-FIDELITY PROTOTYPES | |
| **HOME PAGE ABOUT PAGE**  A picture containing text  Description automatically generated  A picture containing text, furniture, chest of drawers  Description automatically generated  **SERVICES PAGE SHOP PAGE**  Diagram  Description automatically generated  Diagram, engineering drawing  Description automatically generated  **SHOP-DETAILS PAGE BLOG PAGE**  Engineering drawing  Description automatically generated with medium confidence  Diagram  Description automatically generated  **GALLERY PAGE CONTACT PAGE**  Diagram, engineering drawing  Description automatically generated  A picture containing text, whiteboard, document  Description automatically generated  **CART PAGE FARMER’S HOME PAGE**    A picture containing text, furniture, white, chest of drawers  Description automatically generated  A picture containing text  Description automatically generated  **SIGN-IN PAGE SIGN-UP PAGE**  A picture containing letter  Description automatically generated  A picture containing text, chest of drawers  Description automatically generated  **FARMER’S ABOUT PAGE BILLING DETAILS**  Text, letter  Description automatically generated  A picture containing engineering drawing  Description automatically generated  A picture containing engineering drawing  Description automatically generated  A picture containing engineering drawing  Description automatically generated |  |
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| DESIGN PRINCIPLES USEDAND JUSTIFICATION | |

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| INTRODUCTION TO DESIGN PRINCIPALS  * Design Principal is a design rule, which is standards and guidelines provide direction for design. * Design rules are used to increase the usability of the software product. * Usability refers to how easy a user can interact with the website. Users should be familiar and should find it easy to use the interfaces and they should be able to achieve their expected goal by using the design. Usability is important because it determines the success of the system. * Principals to support usability consists of three main categories which are,  1. Learnability 2. Flexibility 3. Robustness 4. **Learnability**  * Learnability is the ease in which the users of a new software application or a product begins effective interaction with the application and achieve better performance. The better the learnability of the application, the less training and time it will take for a person to use it. * According to the learnability principles Healthy Harvests has use some of its principles when designing the interfaces of the system. They are, * Predictability – Predictability supports the user to determine the effects of future actions based on the past interaction history. According to the Healthy Harvest we used predictability as follows. * In the shop page there are several items displayed, so if we click on the image of the product, we will be redirected to another page known as the shop details where the details of the product can be seen with the price and the weight. So, we can change the weight if we want. And then after going back again to the shop page the user already knows that if they click on another item as in the previous products the details of this product will be displayed. So, they know what will be shown next from the previous experience when using the system. * Familiarity – It is the extent in which a user’s knowledge and experience in real world or computer-based domains can be applied when interacting with a new system. * Login page will be one of the best examples for familiarity because as we all know that login UIs are designed in the same way. With asking to enter basic credentials the user can log into their accounts. Here there are two login forms one for the user and one for the farmer. So, when they see the login form, they will feel quite familiar if they have filled other login pages. * Consistency - Consistency means making them look and behave in the same way. When it comes to Healthy Harvest there are some designs which looks consistent. They are, * The navigation bar. Here we used the same navigation bar for all the web pages. There are two main user interfaces for the user and the farmer so after logging into their accounts they will be redirected to their respective pages. So, there we used the same navigation bar by using the same colors, size, and fonts. So even if they move from one web page to another, they will feel that they are staying in our site even when moving from user to farmer home pages.  1. **Flexibility**  * Flexibility is the multiplicity of ways the user and the system exchange information. The main aim of using flexibility is to improve the system usability. * Flexibility is further divided in to five principles of dialogue initiative, multi-threading, task migratability, substitutivity, and customizability. * Here as per the Healthy Harvest there are not any principles that we have used to design the system.  1. **Robustness**  * Robustness is the level of support provided to the user in determining successful achievement and assessment of goal directed behavior. * Responsiveness – Responsiveness is the measure if rate of communication between the user and the system. According to the Healthy Harvest the UI are designed to make it responsive. * First there will be a login form, so after entering the credentials and clicking on the log in button they will be redirected to the home page. * Secondly the cart page. When the user shop good from the shop page and when viewing the details, they can change the quantities that they want to buy and then click on to the cart button where the items will be then added to the cart. * Task Conformance – It is the extent to which the system supports all the tasks that the user would wish to perform. We have set the task conference design in our site as follows, * Since this is an agricultural site which grows organic food items, our customers might expect to buy good from us online. Therefore, we made a shop UI where they can buy products online. * Also since this is a website that sells food items the next most important fact would be the payment method. Not everyone like bank payments and some might not like cash on delivery. Therefore, we made two options where they can choose the payment method and make the payment as they wish. * Also, there is a farmer’s page where we recruit new farmers who like to do harvesting. They might expect a way to contact us directly. Therefore, we made a message box to communicate with them like they can register with us there. |  |
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| PROTOTYPE |
| **TECHNICAL SPECIFICATION**   * In the home page we have used HTML for the basic development of the website, CSS for the process of beautification and JavaScript to implement the form in the website. We have made the interface responsive so it can be viewed by multiple screen sizes without the layout being disrupted. We have added a slide show with multiple images that best describe the products that are available. |  |
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| |  |  | | --- | --- | | **SCREEN DESIGNS WITH DESCRIPTIONS**  **HOME PAGE**     * At the top of the home page, we have four components, they are the website logo, the location, contact information displaying the telephone number and the email address and the open hours. Below that we have the navigation bar consisting of the subsections that are available on the website. Next, we have implemented a slideshow with a description box that gives a brief description about each of the product that is been displayed in the slideshow. After that, we have implemented a section that gives us an understanding about organic farming. In here we have divided the screen into three parts and described about organic agriculture, dairy farming, and increased biodiversity. Below that we have a section that displays the special offers that are available in the site at the moment. It also displays the remaining time for the offer. Below that section we have a section that displays a description of organic fruits, farm fresh eggs and organic vegetables. After that we have a preview of our blog. There are some previews of some posts that are available in the blog and they are complemented with the images that are amiable in the thumb nails of that posts. Next, we have the application form that is for the charity that is carried out by us. A user is able to donate money to this charity which is dedicated to save cows from being slaughtered. Below that we have displayed the details of our team along with their social media links. New members are able to join our team by this as well. After that we have given an explanation on what inspires us to do what we do. Finally, we have the footer that consists of four sections namely a small, description about healthy harvest, our contact information consisting of our address, phone number and the email address, our social media links and finally an email registration for our email updates.     **ABOUT US PAGE**     * This is the Healthy Harvest About page. Here all the details about the farm are included. Like the story of them, their partners and why choose us? We have added three buttons for those descriptions because everyone might not be interested in reading long texts. Therefore, we just included some small detail about the topic and then the user can decide whether to continue reading or not. * Next, we included more about Healthy Harvest by using some text and images to attract the user for the reading there. * Next there is a normal Q&A to show that there is a communication process going through the business and the user. By including those Q&A people might get more aware of the business if they do not know much about them. * Next, we used the same header and footer for all the web pages that we have designed. We use it because people will then feel that this web site is good and consistent with the other pages.   **SERVICES PAGE**     * In services we have divided the screen into four parts in order to display the four product types that are available in our website. They are namely fresh vegetables, farm fresh eggs, fresh fruits, and farm fresh diary. They are given a category image, a logo, and a brief description about the particular product. Below that we have displayed analytics of the farms that we buy from, organic products that we sell, the number of malls and supermarkets that we deal with and the locations that we operate from. Finally, we have given an explanation on the benefits of organic farming.   **SHOP PAGE**   * In the shop page we have displayed the products that we sell on the website. In a single page there are twelve products that have been displayed in a manner of four by three grid. For every displayed product, there is a product image followed by the product name and the price per a given quantity. Below the products we have the navigation buttons into the next and previous pages.     **SHOP-DETAILS PAGE**   * In the shop details page, we can see multiple images of the product and the unit price below the name of the product. Next, we can see a drop down where we can choose the desired quantity of that product. Below that we can see the manufactured date and then we can see a call back button and a show now button. Finally, there is a description area that gives a description about the products with all the information that we need to know in order to buy it.     **BLOG PAGE**     * In the blog page we can see the previews of the blogs that have been posted on the website. In a single preview we are able to see the thumbnail image, the posted date, the topic of the blog post and a small part of the blog itself. For a single page we can see six blog posts in a three by two pattern. Below that we have the navigation buttons to navigate from one blog page to another.   **GALLERY PAGE**     * At the top of the gallery page, we have four components, the website logo, the location, contact information displaying the telephone number and the email address and the open hours. Below that we have the navigation bar consisting of the subsections that are available on the website. This gallery showcases the standard representation of the agricultural society. Along with this we get to see how modernization has contributed to our farmers. These include modern machinery, tools and Genetically Modified crops that have been manufactured in laboratories which increases overall yield of our precious farmer’s crops. Our organization as a whole will gather, sort, record, aid and improve the current standards in this massive farming industry. Finally, we have the footer that consists of four sections namely a small, description about healthy harvest, our contact information consisting of our address, phone number and the email address, our social media links and finally an email registration for our email updates.   **CONTACT PAGE**     * At the top of the contact page, we have four components, the website logo, the location, contact information displaying the telephone number and the email address and the open hours. Below that we have the navigation bar consisting of the subsections that are available on the website. The main reason on why we have added a contact page is that so the user can contact us if the user has any difficulty or an issue on our organization. We have added our address, phone no and our email address to contact us. We have also included a separate form for the user to type in the user’s name, email address, phone no, and then we have added a message box to allow the user to type any message regarding the difficulty or an issue. Finally, we have the footer that consists of four sections namely a small, description about healthy harvest, our contact information consisting of our address, phone number and the email address, our social media links and finally an email registration for our email updates.   **CART PAGE**     * Here also we used the same header and footer to maintain a standard for the system. * Next there is a background image to get the attention of the person going to the page. It is better to use images as it catches more attention than words. * Next there is a cart table so that the user can either add or reduce the quantity or else just remove the whole item from the cart. * Then there is a “Make the Payment” button, this redirects to the billing UI. * The cart page only includes the cart table because we did not want to make it much complex by adding the payment details and all to the UI.   **SIGN-UP PAGE**     * In the farmer sign up page the user can register an account if the user doesn’t have account. The Sign-Up page the user needs to mention their details such as Full name, Home address, Farm address, Contact No, Email, Username and Password or the user can use their social platforms to sign up. * In the buyer sign up page the user can register an account if the user doesn’t have account. The Sign-Up page the user needs to mention their details such as Full name, Home address, Contact No, Email, Username and Password or the user can use their social platforms to sign up.   **SIGN-IN PAGE**     * In farmer sign in page if the user has registered an account, the user can use their username and password to login or the user can use their social platforms to login directly. * In buyer sign in page if the user has registered an account, the user can use their username and password to login or the user can use their social platforms to login directly.   **FARMER’S HOME PAGE**     * This is the farmer’s home page. This is quite like the main home page. We used the same UI here by changing the information, fonts, and images because before coming to this farmer’s home page he will first get into the normal home page. So, if we use different patterns, designs, colors and make it feel different then the user might feel there is no connection between the web pages. * To make it less complex and look more familiar we thought of changing the same UI without going for a new separate design. * Here we just mentioned some information about the farmers and then we created a form where the farmers can communicate with the administration of the business when they face droughts. * We used the chat box to make a communication n process between the farmer and the business. And we mentioned our projects so that the farmers can gain a better understanding of the business, what they go through, and what they have achieved.   **BILLING DETAILS PAGE**     * In this checkout form there are three components, billing address, payment, and cart. In the billing address the user needs to fill out their full name, email, address, city, state, and zip. In the payment method the user needs to fill out the card name, credit card number, exp month exp year, cvv. There is a cart form on the right-hand side of the page where the user has already chosen the products and ready to pay. |  | |  | |  |
| USABILITY EVALUATION RESULTS |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Created By** | | Group 21 | **Test Case Description** | Agricultural Information System (Healthy Harvest) | | | | | | | | | | | |  |  |  |  | |  |  | | |  | |  |  | | | | |  | |  | |  |  |  |  | |  |  | | |  | |  |  | | | | |  | |  | | **Tester's Name** | | Samadhi  Neranji  Dhanuja | **Date Tested** | Were tested when making the pages. Overall testing was done on 2021/4/21 | | | **Test Case (Pass/Fail/Not Executed)** | | | | | | Pass | | |  |  |  |  | |  |  | | |  | |  |  | | | | |  | |  | | **Test Scenario** | Designing UI/UX for the agricultural information system. | | | | | |  | | |  | | | |  | |  | | |  |  |  |  | |  |  | | |  | |  |  | | | | |  | |  | | **Step #** | **Step Details** | | **Expected Results** | **Actual Results** | | | | **Pass / Fail / Not executed / Suspended** | | | | | | | | | 1 | Making the home page | | Home Page | As Expected | | | | Pass | | | | | | | | 2 | To make the About page | | About Page | As Expected | | | | Pass | | | | | | | | 3 | To make the services page | | Services Page | As Expected | | | | Pass | | | | | | | | 4 | To make the shop page | | Shop Page | As Expected | | | | Pass | | | | | | | | 5 | Making of the blog page | | Blog Page | As Expected | | | | Pass | | | | | | | | 6 | Making of the gallery | | Gallery Page | As Expected | | | | Pass | | | | | | | | 7 | To make the Contact Page | | Contact Page | As Expected | | | | Pass | | | | | | | | 8 | Making of the cart page | | Cart Page | As Expected | | | | Pass | | | | | | | | 9 | To make the login pages for the farmer and the user | | Login Pages | As Expected | | | | Pass | | | | | | | | 10 | Making of the Farmer’s Home page | | Farmer’s Home Page | As Expected | | | | Pass | | | | | | | | 11 | Making of the Farmer’s About page | | Farmer’s About Page | As Expected | | | | Pass | | | | | | | | 12 | Linking all the pages | | The final web application | As Expected | | | | Pass | | | | | | | | 13 | Testing all the web pages after linking to each other | | The final web application | As Expected | | | | Pass | | | | | | | |  |
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| CONCLUSION |
| * Walt Disney is one of the greatest UI/UX designers ever born. His animation skills are so imaginary that everyone loved his animations. This project is related to designing and involves lot of creativity and requires lot of thinking ability like to think what kind of UI’s have to be made, to the target end users are and so on. * Here we designed the project for the “Healthy Harvest” an agricultural Information System and we have added some more functions to this application where the user can buy the products and there are separate UI’s where the farmers can communicate with the business when needed. * Every UI is designed in terms of given principles and it does respond when it comes to our project. We wanted not to just make UI’s but to give some kind of real experience in using the web application. That is why we did our project in that way. As we have mentioned before we deigned the UI using html, CSS, and JavaScript. We just wanted to give some kind of real experience in using the UI therefore we made it linked with other pages. Since we have discussed all the facts relating to the web application that we have made. We think that we have used all the guidelines and rules given to us and we completed all the requirements of this project. |  |
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| REFERENCES |
| 1. Contributing Writer. (2014, March 31). PASSIONATE ABOUT POLYCULTURE: Joel Salatin, “lunatic farmer,” shares his inspiration for wholistic farming. Retrieved April 23, 2021, from Themindfulword.org website: <https://www.themindfulword.org/2014/joel-salatin-lunatic-farmer-polyculture/>   **CONTRIBUTION OF GROUP MEMBERS**   |  |  |  | | --- | --- | --- | | PLYMOUTH ID | NAME | CONTRIBUTION | | 10707241 | H S Kaushalya | Main About Page, Farmer Home Page, Farmer About Page & Cart | | 10707385 | V P N Sulakshika | Home Page, Services Page, Shop Page, Shop-Details Page & Blog Page | | 10707372 | P D S Sigera | Gallery Page, Sign-In Page, Sign-Up Page, Billing Details Page & Contact Page | |  |
| |  |  |  | | --- | --- | --- | |  |  |  | |  | THANK YOU! |  | |
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