2020\_21

Hatfield Apple Tree Suppliers System - HATS GP2

Instructions:

This assignment relates to the HATS Case Study used in GP1. However, there has been an update on the specification. So, first read the case study update in Section 1. The tasks you need to complete are in Section 2 of this document. Some supporting materials are provided in Section 3. Submission arrangements are explained in Section4. The marking criteria to which you will be assessed is listed in Section 5. A final checklist to help you work through the tasks is also provided at the end of this document (Section 6).

1. Case Study Update

It has been decided that the HATS system must serve not only the needs of the customers, but also the needs of the Growers and the Dispatchers. After further discussion with the HATS Management Team, the following additional information has been added to the description of the HATS system

* Each tree offered for sale will have its own unique reference and the information outlined in the HATS case Study described in both the DB assignment and the GP1 Case Study. In addition, it should have a field to say whether it is: available, sold, dispatched
* Customers, who may be private individuals or garden centres, will only be able to view or order trees online
* Customers will be able to view available trees available online from the tree catalogue. The website will have a number of filters to allow customers to narrow down their searches. If there are no trees with the search criteria can be found in the catalogue, close alternatives will be offered.
* Customers will be able place an order for one or more trees. If a customer has already bought trees from HATS, they will have an account, otherwise they will be asked to register first. The order will display the total costs, and the customer invited to make payment.
* Orders may be cancelled and money refunded at any time up to the dispatch date
* If the customer is unable to find the exact tree they want, they can still make a Request with the details of their required tree (This information will be used by Growers for planning future grafting activities)
* Each tree has "available on" information, giving the week in which they will be available for dispatch. Order items are initially stored separately so that trees can be prepared for delivery by the Dispatchers at an appropriate time. Items on a customer order may need to have different delivery dates
* DIspatchers use order item information to produce Dispatch lists. These are passed to the Growers so they can select the appropriate trees for the next deliveries and transport them to the Dispatch Office, where they are packaged together with a delivery note.
* The actual deliveries are done by a courier company who takes care of contacting customers about deliveries. This aspect is NOT part of the HATS system. However, they will inform Dispatchers of all successful deliveries and return any undelivered items. Dispatchers will record this information
* Periodically, the Dispatch staff will update the tree catalogue. All successfully delivered trees will be archived and then deleted from the tree catalogue. Undelivered items may be offered for re-sale
* The Head Grower is responsible for adding trees to the HATS system when they become ready for sale. At any time, HATS has a range of "root stock" apple trees growing in its nursery. The Head Grower, will consult the customers' Request list and use her experience of expected demand, to plan the work of the growers. This work will involve selecting suitable "root stock" trees and grafting onto them specific varieties. (These activities are not part of the system which we are developing). However, once a tree has had time to accept the graft and is available for sale, the Head Grower gives it a reference and adds it to the catalogue. If the tree was grown in response to a request from a customer, they need to be informed and can then order the tree in the usual way.

2. Tasks and Outcomes

The tasks you need to complete for this assessment**:**

* **Part A: Project Management**
* **Part B: Use Case Diagram**
* **Part C: Use Case Descriptions**
* **Part D: Level 2 Data Flow Diagram**
* **Part E: Storyboards**

Part A: Project Management [20 marks]

You will be expected to use project management software to support your team work. and should start using this from the start of your work on this assignment. Evidence for this should be available as appropriate screen shots and combined into a single document

* Communication - provide ways for members to communicate with one another. Produce:
  + one screen shot showing a short message sequence between team members during the weeks beginning 25/01 and/or 1/02 (to ensure some communication takes place at the start of this assignment)
* Kanban - provides a way of identifying and tracking the progress of project tasks. Produce:
  + one starting screen shot to show disposition of tasks at the start of this assignment
  + one midterm screen shot showing some completed and some to-be-completed tasks
  + one final screenshot showing completed tasks
* Repository - allows team members to save their work in a central repository, so that they can both see and amend each other's contributions, or return to a previous version when necessary. Produce
  + one screen shot from the middle of assignment showing contributions from team members to a central repository

You may us any appropriate software. For revision please see Unit 3 : L07 & L08

Note: You are only required to submit some evidence of these tools. However, in cases of disputes about relative contributions of team members, staff my request further evidence in support of your claims.

Part B: Use Case Diagram [25 marks]

In GP1 you identified and documented a subset of system requirements by using User Stories and Volere shells. At the client’s request, a more complete set of the system’s functional requirements is needed. Before you draw this diagram you should (Just as in Tutorial T07/T08):

* identify human actors who will be using the HATS system
* list tasks they may wish to perform
* identify further non-human actors/other systems that may be involved

Draw a UML Use Case Diagram for the HATS system to be implemented

The diagram should use appropriately labelled UML icons, to show:

* the main actors - those human/external systems who may be using the system
* possible use cases
* at least, ONE use case connected to others by <<include>>
* at least, ONE use case connected to others by <<extend>>

Part C: TWO Use Case Descriptions [15 marks]

Using the Use Case Descriptions Template provided, document

* UCDescription1 - describe the activities of your use case for Add a tree

(Remember to make appropriate checks)

* UCDescription2 - describe the activities your use case for Place an Order

Part D: ONE Level 2 Data Flow diagram. [ 15 marks]

A level 1 Data Flow Diagram has already identified the following functional areas:

* Customer processes
* Dispatch processes
* Grower processes

Draw a **Level 2** Data Flow Diagram of processes which are likely to take undertaken by the Customer (ONLY).

These processes should:

* be consistent with Use Cases with the Customer as an actor in your diagram for Part B
* have the "Sales" as the location
* show data flows from/to external sources/sinks
* show data flows from/to data stores within the system - these are likely to be Database tables but, at this stage, they do not need to be fully normalised

Part E: Storyboards [25 marks]

Design a potential HCI (Human Computer Interaction) solution to implement interactive processes associated with the system identified in Parts B & D. The Storyboard should model what the user interface would look like to the actors (i.e. main users), and how it should behave, showing inputs/outputs and navigation between screens.

The following screen designs should be created to show the overall style of the interface design:

* **Storyboard 1** - a main pre-login screen
* **Storyboard 2** - the main post-login screen, which should include access to the processes and data consistent with your use cases, but actions not required by the Customer should be “grey’ed out”.
* **Storyboard 3** - the main screen for processes required by the Customer
* **Storyboard 4** – ONE screen showing details required/provided for ONE of the processes which could be selected by the Customer

Your collection of storyboards should show:

* controls to allow users to navigate between, and within, screens as necessary
* data display areas (i.e. outputs) that are relevant to users in deciding and selecting a course of action
* data entry areas (i.e. inputs) that allow users to interact with the system and update its information

The format and structure of storyboards should be consistent with information given in lecture and tutorial and take account of the notes on annotations, diagram standards and resources below.

3. Supporting Materials and References

* The following web sites provide free software tools for drawing diagrams (subject to usual conditions)

<http://Balsamiq.com>   
http://dia-installer.de/  
<http://www.diagram.ly/>  
<http://www.umlgraph.org/index.html>  
<http://argouml.tigris.org/>

https://www.draw.io/

* In addition, Microsoft Visio is available via <https://helpdesk.herts.ac.uk/> by choosing the Microsoft Imagine option from the software menu options.
* The storyboards (Part E) may also be produced using MS Visio (not compulsory).

4. Submission arrangements

**Submit ONE zipped file to Studynet by Wed 17th Feb 18.00 containing**:

* **Part A; evidence of 5 screenshots combined into a single document**
* **Parts B - E : solutions to parts B – E in a single document**.
* Diagrams produced by various tools/graphics packages into a .jpeg (or other image format)
* Any hand-drawn documents (if you have any) can be scanned/imaged using an image format
* Completed templates for Part B are already in MSWord

Import all of the above into a single MS Word document.

* Completed **GP2 “Roles & Contributions Form”** & **GP2 “Assignment Briefing Sheet”** signed by members of the group – as for GP1, these should be a scanned document or an image of the original

**Only ONE submission per group is required**

5. Marking Criteria

**The assignment must be completed in your assigned teams) only. Individual submissions or those with incomplete teams will not be accepted without the prior consent of the module leader.**

**5.1 Notes on marking criteria:**

***Lower*** ***marks*** typically indicate that templates and diagram are incomplete contain errors/omissions/poor understanding of the case study, or do not conform to the diagram conventions e.g. the incorrect use of arrows on a use case diagram. ***Higher marks*** will indicate that not only do diagrams use the appropriate icons, but also show an understand of the requirements of the case study and the appropriate use of design tools

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | | **Actual Mark** | **Max Mark** |
| **Part A: Project Management** | | | |
| Evidence of communications |  | | 4 |
| Evidence of the 3 uses of Kanban |  | | 12 |
| Evidence of the use of Repository |  | | 4 |
| **Total Part A** |  | | **20** |
| **Part B: Use case Diagram** | | | |
| Appropriate choice of actors | |  | 5 |
| Appropriate choice of use cases | |  | 5 |
| ONE use case connected to others by <<include>> | |  | 3 |
| ONE use case connected to another by <<extends>>. | |  | 3 |
| Completeness of your choice of actors & use cases | |  | 6 |
| Correct Use Case Diagram conventions | |  | 3 |
| **Total Part B** | |  | **25** |
| **Part C: Use Case Descriptions** | | | |
| UCD1:"Add Tree" template | |  | 5 |
| UCD2:"Place an order" template | |  | 5 |
| Appropriate use of template conventions | |  | 5 |
| **Total Part C** | |  | **15** |
| **Part D: Data Flow Diagram** | | | |
| Processes consistent with use case Diagram | |  | 3 |
| Appropriate data stores | |  | 3 |
| Appropriate sources/sinks | |  | 3 |
| Appropriate labels for data flows | |  | 3 |
| Correct use of diagrams conventions | |  | 3 |
| **Total Part D** | |  | **15** |
| **Part E: Storyboards** | | | |
| appropriateness/completeness of storyboard | |  | 10 |
| navigation | |  | 5 |
| quality of design | |  | 10 |
| **Total Part E** | |  | **25** |
| **FINAL TOTAL** | |  | **100** |
| **% CONTRIBUTION TO MODULE GRADE** | |  | **12** |

5.2 Marking Scheme – Team Contribution

As a team you should consider and submit the “**GP2 Roles and Contributions Form**” posted with the assignment. This asks you to give a percentage “contribution” that each of you has made to GP2. % contributions should add up to 100%. **For a fuller explanation, please see the GP1 specification**

**UH Grading Criteria:**

Your raw final mark out of 100 will be **scaled to be worth 12%** for the module overall. To obtain a % mark for each section : your mark/section total \* 100.

Example: part A mark of 15/25 \* 100 gives 60 which is considered "very good" - see below

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Generic Grading Criteria | no merit | clear fail | marginal fail | marginal pass | satisfactory | good | very good | excellent |
| Marks in % | 0 - 19 | 20 - 29 | 30 - 39 | 40 - 49 | 50 - 59 | 60 - 69 | 70 - 79 | 80 - 100 |

// See Assignment checklist below

6. Assignment Checklist

*This is a summary of the tasks for you to work through as a checklist. Full details are given elsewhere.*

|  |  |  |
| --- | --- | --- |
| **Task** | Use the **discussion** on Canvas to ask any questions | **Done** |
| 1 | Read (and re-read) the **case study and Section1 Case study update** (above), making annotations and carry out some additional research where required. | 🞏 |
| 2 | Decide on and set up communications and repositor  Take screenshots of initial communications | 🞏 |
| 3 | Set up a group project using **kanban** facilities to identify tasks & their management. Take screen shot | 🞏 |
| 4 | Agree & produce the team's **Use Case Diagram.** | 🞏 |
| 5 | Download ‘**GP2 Use Case Descriptions**.docx’ and make sure you have two copies | 🞏 |
| 6 | Agree & complete the team's **TWO** **Use Case Descriptions** using the template | 🞏 |
| 7 | Agree & complete **Data Flow Diagram** | 🞏 |
| 8 | Agree & complete **Storyboards** for the user interface | 🞏 |
| 9 | Collect evidence for your team's use of **Kanban, repository and communications** Integrate into one document | 🞏 |
| 10 | Complete the **Assignment Briefing Sheet (ABS)** as a team. | 🞏 |
| 11 | Complete the **Roles and Contribution Form** as a team. | 🞏 |
| 11 | Integrate parts B-E into ONE MSWord document | 🞏 |
| 12 | Collect all documents for **parts A , B - E report, signed R&C Form, signed ABS into ONE zipped file. Submit** by the date and time shown on Canvas | 🞏 |
| 13 | Check that the submission contains all required documents | 🞏 |
| 14 | **Submit** by the date and time shown on Canvas | 🞏 |