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Sprint Backlog

April 10, 2016

1 SCRUM

The agile software development framework chosen for the project was the SCRUM method. This method was chosen because it is lightweight, simple to understand and easy to use. Scrum will be used to address complex problems, increase productivity and deliver a unique solution. An iterative process will be followed where one team is responsible for the front-end and the other team is responsible for the back-end. The process will be iterative whereby the front end team will develop the web pages and the back-end team will then link these pages to the server. It will also be assumed that product specifications will remain constant for the prototype phase with any changes been added after the development of the prototype

1.1 THE PROJECT CHART

The various components of the project chart is described in the introduction of this document.

1.2 PRODUCT BACKLOG

The product backlog can be seen in Table 1.1

1.3 SPRINT BACKLOG

the sprint backlog can be seen in Table 1.2, 1.3 and 1.4

1.4 SPRINT RETROSPECTIVE

The project consisted of 3 sprints which lasted 1 week each. This consisted of two daily meetings that happened on a Monday and Friday of each sprint.

Sprint 1: 21 March —27 March

This sprint goal was to achieve the first 5 (Element 1-5) tasks on the sprint backlog. These tasks were completed in time with a few adjustments. In element 1, forms for clients to create their accounts was removed and added as a server task instead. The user accounts are manually stored on the database for the prototype stage. The account creation page will now be done once CourierJZ approves the prototype design as this page may lead to developer complications. In element 4, no form for the pickup location was added since it will be stored in the user's profile and thus simplify the act of sending a package.

Sprint 2: 28 March —3 April

This sprint goal was to achieve elements 6—10 on the sprint backlog. Only tasks 7—9 were completed. This was due to the complexity of element 10 and the programmers time being limited by other commitments. For element 6 the payment management system was not implemented due to it not being an integral part of the prototype system. The information

about the user's payment details (i.e. Credit card details) will now be stored in the users profile when implemented, this will make the process of sending a package simpler as the card details will not need to be entered each time as in is saved on the database.

Sprint 3: 4 April —10 April

This was the last sprint for the prototype stage. For this cycle elements 10—16 needed to be completed for the last sprint. From element 10, the route assignment algorithm was not implemented. This is because the developers decided to focus on one algorithm (packing algorithm) due to time constraints. During the prototype stage, for simplicity the developers decided to only implement one driver profile, so there was only one route determined, therefore the page for drivers to pick routes was not necessary. For element 12, the check list was replaced by a submit button for each user. This was done so that when items were ticked, they could not mistakenly be unticked in the delivery process. Element 13 and 14 were removed from the list because the shortest distance algorithm was not implemented, so delivery times could not be correctly assigned for each package. Element 15 and 16 were combined into a receiver page with the relevant details being accessible by inputting the tracking ID into the receiver dashboard.

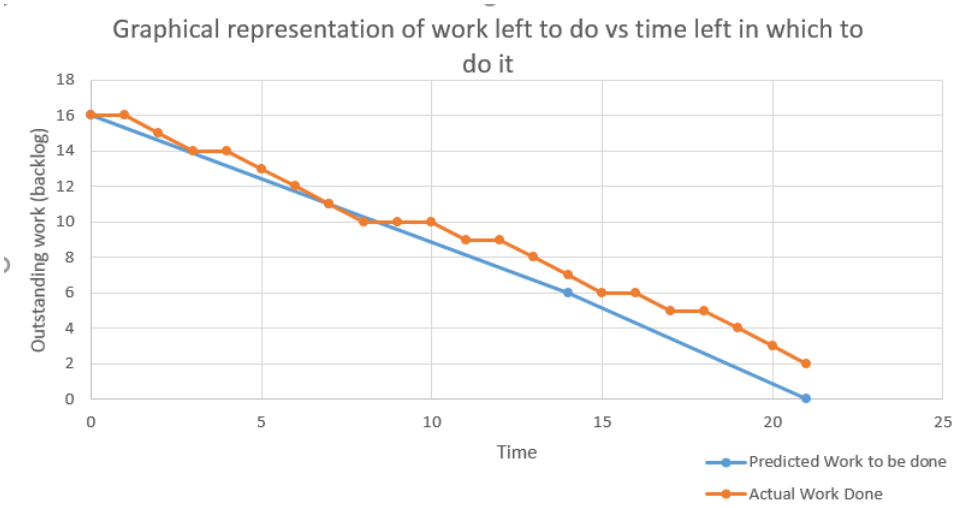

Figure 1.1: Burn chart

It can be seen from Figure 1.1 that in the beginning of the developmental process of the prototype,the project was on track. However towards the end, the actual work that was being performed was not meeting the targets. This could be because the work that needed to be performed was underestimated and therefore time was not allocated correctly. Care must be taken to ensure that these task are completed in the nearby future, otherwise the project has a high risk of not being completed in time.

Table 1.1: product Backlog

ID	Story	Estimate	Priority
1	As a sender I need to be able to create an account	10	1
2	As a sender I need to be able to log in to my account	2	2
3	As a sender I need to input the dimensions of my package	2	3
4	As a sender I want to input my details	3	4
5	As a sender I want to input the receiver's details	2	5
6	As a sender I need to be able to pay for the services	5	6
7	As a fleet assigment manager I need to be able run a route generation algorithm	5	7
8	As a fleet assigment manager I need to see a list of packages in the depot	1	8
9	As a driver I should be able to log in to my account	1	9
10	As a driver I want to pick a vehicle and a route	10	10
11	As a driver I need to see the contact details of my next delivery / pickup	2	11
12	As a driver I want to check off the packages I drop off / pickup	3	12
13	As a sender I need to know when the parcel will be picked up	1	13
14	As a sender I need to be able to know when the package will be delivered	3	14
15	As a receiver I need to receive a notification of the intended delivery	1.5	15
16	As a receiver I need to check the estimated time of delivery	1	16
17	As the CEO I want to see statistics on the clients	4	17
18	As the CEO I want to see statistics on the drivers	4	18
19	As the Vehicle Maintenance Manager I want to see vehicle statistics such as mileage	6	19
20	As the Vehicle Maintenance Manager I want to schedule the maintenance of vehicles	5	20
21	As the Accounts Officer I want to see the list of payments made (for bookeeping purposes)	6	21
22	As the Accounts Officer I need to see a list of vehicle maintenance payments (for bookeeping purposes)	5	22
23	As the CEO I want to generate reports on income	5	23
24	As the CEO I want to generate reports on expenditure	5	24
25	As a driver I want to be able to request a day off	6	25
26	As a driver I should be able to log out of my account	1	26
27	As a sender I need to be able to log out of my account	1	27
28	As the Vehicle Maintenance Manager I want to see vehicle statistics such as fuel consumption	5	28
		105.5	

Table 1.2: Sprint backlog

ID	Story	Sprint backlog tasks	Date
1	As a sender I need to be able to create an account	Create a django project	21/03/2016
		Design database structure	21/03/2016
		Create databases	22/03/2016
		Link page to the django server	22/03/2016
		Save user account details in the database	23/03/2016
		Make a form where clients are able to create their accounts	23/03/2016
2	As a sender I need to be able to log in to my account	Make a log in page	24/03/2016
		Save log in details of senders in database	24/03/2016
3	As a sender I need to input the dimensions of my package	The user is required to fill in the dimensions of their package.	25/03/2016
		Send the package dimensions to the packing algorithm	25/03/2016
4	As a sender I want to input my details	Make a form where the sender can enter their details	26/03/2016
		Store the sender's details in the database	26/03/2016
5	As a sender I want to input the receiver's details	Make a form where the sender can enter the receiver's details	27/03/2016
		Store the receiver's details in the database	27/03/2016
6	As a sender I need to be able to pay for the services	Update the accounts and payments databases	28/03/2016
		Authorise the user's packages for transport	28/03/2016
		Create a payment page for the user	29/03/2016
7	As a fleet assigment manager I need to be able run a route generation algorithm	Have a button that allows the manager to run the route allocation algorithm	29/03/2016
8	As a fleet assigment manager I need to see a list of packages in the depot	Display a list of all the packages that are at the depot that need to be allocated routes	30/03/2016

Table 1.3: Sprint backlog continued

ID	Story	Sprint Backlog Tasks	Date
9	As a driver I should be able to log in to my account	Make a driver list in the database	31/03/2016
		Implement code to facilitate logging in by drivers	31/03/2016
10	As a driver I want to pick a vehicle and a route	Implement route assigning algorithm	01/04/2016
		Implement packing algorithm	01/04/2016
		Implement a google map using the google maps API on the driver interface	02/04/2016
		Implement a checklist of all items on the driver's route on the driver interface	02/04/2016
		Display contact details of client on web page	03/04/2016
		Implement a checklist option to choose between routes on the before page of the driver interface	03/04/2016
11	As a driver I need to see the contact details of my next delivery / pickup	Display the contact details of current pickup/ delivery	04/04/2016
12	As a driver I want to check off the packages I drop off / pickup	Implement a checklist for the packages on the driver's interface	04/04/2016
13	As a sender I need to know when the parcel will be picked up	Implement code to calculate the estimated time of pickup	05/04/2016
		Display the value of the calculated time of pickup on the sender interface	06/04/2016
14	As a sender I need to be able to know when the package will be delivered	Calculate the ETA when the payment, and allocation of a package has been made	06/04/2016
		Send the user a notification with the ETA	07/04/2016
		Update the ETA on the user's interface	08/04/2016
15	As a receiver I need to receive a notification of the intended delivery	Implement code to send a notification when the ETD has been calculated	09/04/2016

Table 1.4: Sprint backlog continued

ID	Story	Sprint backlogs	Date
16	As a receiver I neeed to check the estimated time of delivery	Display the ETD when it has been calculated	10/04/2016
17	As the CEO I want to see statistics on the clients	Calculate all the statistics on clients	11/04/2016
		Display the statistics on the CEO interface	11/04/2016
18	As the CEO I want to see statistics on the drivers	Calculate all the statistics on drivers	12/04/2016
		Display the statistics on the CEO interface	12/04/2016
19	As the Vehicle Maintenance Manager I want to see vehicle statistics such as mileage	Implement an algorithm that computes vehicle statistics	13/04/2016
		Display the results of the algorithm	13/04/2016
20	As the Vehicle Maintenance Manager I want to schedule the maintenance of vehicles	Implement an algorithm that computes the need of a vehicle to undergo maintenance	14/04/2016
		Add an undergo maintenance button	14/04/2016
		Display the results of the algorithm	15/04/2016
		Update the list of available vehicles	15/04/2016
21	As the Accounts Officer I want to see the list of payments made (for bookeeping purposes)	Fetch the payments information from the database	16/04/2016
		Display the payment information summary	16/04/2016
22	As the Accounts Officer I need to see a list of vehicle maintenance payments (for bookeeping purposes)	Fetch the payments information from the database	17/04/2016
		Display the payment information summary	17/04/2016
23	As the CEO I want to generate reports on income	Generate a pdf/report of the information the CEO is viewing	18/04/2016
		Have a generate report button on the CEO's interface	18/04/2016

Table 1.5: Sprint backlog continued

ID	Story	Sprint backlogs	Date
24	As the CEO I want to generate reports on expenditure	Generate a pdf/report of the information the CEO is viewing	19/04/2016
		Have a generate report button on the CEO's interface	19/04/2016
25	As a driver I want to be able to request a day off	Have a request day off button on the page before page of the driver interface	20/04/2016
		Implement code to take the driver off the available drivers list	22/04/2016
26	As a driver I should be able to log out of my account	Implement code to facilitate logging out by drivers	23/04/2016
27	As a sender I need to be able to log out of my account	Make a log out button on the web page	24/04/2016
		Revoke the user's access	24/04/2016
28	As the Vehicle Maintenance Manager I want to see vehicle statistics such as fuel consumption		26/04/2016