Dublin City University - School of Computing

BSc in Enterprise Computing

4th year project proposal (CA472)

Idea Proposal

2019/2020

Updated October 2019

Student name	Student Number
Vincent Lloyd Yuson	16343176
Mihail Gaidau	15490698

Project Title:

Product name: Payday

Time Management System

Date:

08/11/2019

Project Summary (1 page):

Payday, it is a time management system targeted towards SMEs with 60 or less employees. What our product will do is to digitise timesheets for SMEs.

The goal for our product is to digitise timesheets. The idea is that employees will have the freedom to fill in their own timesheets, their rates will already be on the timesheets (employees won't have permissions to edit it), and they will have to send their timesheet to their manager, when they have it filled out. The timesheet will add up all their hours and multiply it against their rate so the employees know how much they are going to be paid before tax. The employees then send their timesheets to their manager for approval. If a company has more than one manager, employees will have the choice to choose one manager to send their timesheets to. To avoid confusion employees will only be allowed to send one time sheet a month, unless the manager has approved the submission of 2 or more timesheets.

For managers, they will have the same view of the timesheet as the employees . They will be able to put in their working time, their rates will be already attached with no permissions to modify it, and as for approval, their timesheets will have to be sent to the owner of the company for approval.

The timesheets that are approved are then sent onto the Finance team, where payment will be sent out to the employees.

When a timesheet is sent to either the manager/Finance team/Owner of the company, a notification will pop up notifying that a person of the company has sent in their timesheet.

We would provide a company with a standard of 10 licenses with a purchase of Payday. If they wish to have more licenses, the cost will be extra. To keep it simple for the meantime, we will only be selling licenses in bulks of 5. The company code, is a credential an employee would enter, along with their username and password, to show that they are an employee of the chosen company. The company would then give these licenses to their employees so they are able to log into.

Digitising timesheets will be its main feature but not its only feature. Another feature we will also implement is a roster/scheduling board. This roster/scheduling board will be updated on a weekly or monthly basis with times the employees are working, and employee ID or employee names (depending on the confidentiality policies of the company). Employees will also be able to request days off, request which days they could work (option only to people who are part time), and swap shifts with fellow employees. All of this will only be possible with the approval of a manager.

Expected Technical Delivery (1 page):

With regard to the technical delivery, what do you intend to deliver in your final project delivery?

Our intentions for the technical part of the final year project are as follows. To create a web app that lets the employees to input their starting and finishing times per day of work. The system should calculate total hours per working week or month for the employee. The rate is set by the manager. The manager will be able to organize the working week for each employee. These set of tasks the employee will be able to check off as they complete them. The manager will be notified once the tasks are completed for the day and also when he needs to approve the times for the employee.

Front-end will be made with React/Django and bootstrap for styling. Using bootstrap will allow for mobile accessibility.

In order to create a database for all the employee data we will be using MySQL. MySQL is relatively easy to use and manage. The database will be used to create the working week schedules and to store employee daily check in and out times.

To make it web accessible and cloud based we are planning to host it on pythonanywhere. We will evaluate different ways of hosting our web-app as time goes.

Market Rationale (1 page):

Our target market for our idea is SMEs. We have targeted small to medium enterprises as IT departments, in these types of enterprises, are usually very small or non existent. So in regards to software, these types of business don't have the resources to create their own time management system. So when it comes to timesheets they are stuck with basic methods, such as using excel or paper timesheets given up by hand to their manager.

To make it easier for businesses to manage and access, we decided to make our product a web app instead of it being a thick-client application. The main reason we opted for our product to be a web app instead of it being a software, was accessibility. Having our product as a web app will make it easier for businesses and their employees to access our product. Our product is not only aimed at businesses which are mainly desk jobs, but also businesses that focus on work outside of an office environment. For example, construction work.

We believe our idea will be successful as there is a demand for a time management product such as ours. Mihail's father (who owns his own business) was asking him for products that will help manage the payment of his employees more efficient. During my Intra (Lloyd's Intra) there was always a complaint with the time management system they were using to pay their employees. They complained how it was not easily accessible, complicated to use, and that

it was very hard to modify to their liking. We believe that these two separate incidents aren't coincidence. That's why we believe there is a demand for a product such as ours.

We plan to validate this market by going straight to the source. We plan on interviewing and surveying small to medium business in the hopes that a handful of companies would be interested in an ideas such as ours. If they already have time management system in place, we will ask whether they have any improvements they could make to it.

As for secondary research, we will explore the web for articles and reports in hopes to gauge the amount of companies that are still using paper/ Excel based timesheets.

Proposed Timeline (1 page max):

Please provide a basic timeline plan for the project from now until the end of semester 2. What are the tasks that need to be addressed and who will take responsibility for them?

Weeks 1-4:

- Initial business idea research to take place.
- Meetings with supervisors and analyzing feedback.

Weeks 5-8

- Project proposal submission.
- Proposal to be presented to the board where we will gain very valuable feedback. This will be beneficial for the rest of the project.

Weeks 9-12

- Brainstorming initial technical delivery.
- Implementing more functionality.
- Surveying and interviewing potential customers.

Weeks 13-20

- Improving technical product.
- Prepare and submit initial-delivery document.

Weeks 21-24

- Improving current functions and interface for greater accessibility.
- Expanding and improving backend functionality
- Adding extra functionality such as enabling web-app to send notifications to managers and prompting them to approve timesheets.

Weeks 25-30

- Conducting web-app testing and bug-fixing.
- As both of the team members has his own strengths and weaknesses we will work in close collaboration and apply our strengths to different tasks and sections of the project

Workload Distribution (for teams with 2 or more members):

How will the workload be distributed? Technical and Commercial components? Bullet

point listing is adequate.

Technical:

Mihail

- Front-end design
- The technologies that will be used are React and Django. We are envisioning an accessible and easy to use interface that can complement people who are not technically sound.

Vincent

- Database design
- As our project requires a substantial amount of back-end functionality and Vincent Yuson has gained important knowledge in his previous job placement. He will be mainly working on it and where possible Mihail Gaidau will be open to help.

Commercial:

Mihail

- Will conduct market research

Vincent

- Will compile a questionnaire so we can survey potential customers.

- Work will be distributed taking into account both of the member's strengths and knowledge in different areas.
- White boarding sessions will be scheduled to conduct problem solving towards the project. This will help to visualise a solution for the problem that we need to overcome.
- We will be working closely together in order to tie both front-end and back-end together.

Staff Consulted:

Michael Scriney was the first supervisor we consulted. We talked about our first idea which we came to the conclusion that it was not feasible as the market was not there and it was in its essence a very basic version of google maps.

Our group thought of another project idea. We then arranged meetings with Dr. Michael Scriney and Dr. Cathal Gurrin.

Cathal set up a meeting with us the next day of emailing him. We pitched our idea to him and he said that it was a very easy idea to market and the market was there. He said that he was willing to supervise our project but we thought the fit wasn't right.

Our next meeting was then with Michael. We pitched our idea to him and he seemed to be interested in him. He showed us what we needed to do in order to build it and how to go about it. We both liked how interested he was in supervising our project and how understood where we were planning to take it. We then chose Michael to be our supervisor.