



Computing Project

Project Specifications

Muhammad Khan

Supervisor
Matthew Hoban

Table of Contents

WORK OVERVIEW	2
TECHNOLOGIES AND MATERIALS	3
MOTIVATION RESEARCH	3
EXISTING KNOWLEDGE	3
NEW KNOWLEDGE	3
TIMELINE AND MILESTONES	3
PROJECT REPOSITORY ADDRESS.....	4

Work overview

I am planning to implement a business management system for the business crewing industry. This system will allow business managers/owners to register their new and existing employees by adding their details to the database such as name, address, email address, date of birth, phone number, UTR and hourly rate to the database. Whenever the owner/manager get a new job from a client, they will fill in the job details form with details such as job venue, time, date and how many hours the shift is and select the employees to send it to, send it off to them. Once the job has been submitted, the staff that are available will get a automated notification on their phones asking them to confirm if they can do that shift, the staff can reply with a Yes or No.

If an employee replies with a yes, they will automatically be added on that shift and the manager will be notified that the job has been accepted. The staff that has accepted the job will be highlight in green, and it will be added to their calendar. The manager will not be able to send another shift on the same day and time to that employee to avoid any double booking. If a specific job requires more then one crew, it can be done in the same way by selecting their names and send it to all of them at once. The employees will reply to the text with a yes or no, if one of them is not available and reply to the text with no, the manager will be notified, and he will be able to send it off to someone else.

However, the employee will also be able to provide a reason to why they are not able to accept the job, but they don't have to. This way the manager will know why they are not able to accept the job and can send the job to someone else.

The staff that have accepted the job, will get an automatic job confirmation 2 days before the shift, the job confirmation will include job details such as job venue, time date and contact number and list of crew that is on that job along with contact numbers of the supervisor. This is to ensure they don't forget about the job.

The application will automatically create a time sheet for the crew, and it will be automatically emailed to them at the end of the month, the sheet will have all the jobs details they have done, once they have received the time sheet and have checked all the hours, they can reply to email by sending their invoice.

The system will also allow the managers to have their own accounts. For them to use any of the features they have login to them system. There will be different level of access for the staff and the mangers, the managers will be able to access every feature, such as company monthly reports etc whereas as the crew will only be able to access calendar.

When the crew logs in they will be able to see a calendar, which will show what day and time they are working, and detail about the job.

Technologies and Materials

The languages I am going to build it will be html, CSS and java script for the front end and for the back end I will use php, mongo DB or MySQL and google libraries such as jQuery. I am going to be using different libraries, one of them is bootstrap, ratched and responsive boilerplate libraries and php library.

The equipment's I will need are laptop, or an android/iPhone phone and access to the internet. I have already purchased a laptop for my university assignments, which I will used to implement it and I also have access to an android phone.

Motivation research

My cousin works in a crewing industry, and he runs a business crew company where he provides a crew to companies that need them for specific events for setup and de-rigs. I interviewed him and I also interviewed other crewing companies. They currently use text messaging. Whenever they get a job they call their crew or send them a text message from their phone asking them if they are available to work and wait for their reply and if the staff say yes then they use calendars such as google calendar <https://calendar.google.com/calendar/r> to make a note of it, then day before a job, they manually write text messages with the job details and send it to the staff who are on shift.

And the crew manually makes the note of the job using calendars or third-party apps such as notes.

Existing knowledge

In my first year of studies, I did a module called web development, where I learned about html and JavaScript and CSS. In my second year I learned basic algorithms, where I learned about different data structures and algorithms. I also did data and the web in my second year, where I learned about databases and how to use different web application frameworks such as flask.

New knowledge

I have never done any programming with php before, I have to learn php, and will do this by doing an online course on sites such as <https://www.codecademy.com/learn/learn-php> and will also be watching YouTube tutorials such as https://www.youtube.com/watch?v=OK_JCrrv-c.

Timeline and milestones

I will need to conduct more interviews with bigger crew companies that are well established that might be using similar systems to gain better understanding of their current system and check what issues they currently having with existing system and how can it be further improved.

I will also conduct interviews with the crew to see what other features they would want on the system other than a calendar.

My minimum viable product will be to create a login, which will allow the user to login to them system, and implement the backend and frontend which will allow the manger to send a text to their staff and the staff should be able to respond with a yes or no, this is my minimum viable product.

Gantt Chart Project



Project repository address

<https://github.com/mkhan012/ComputingProject.git>