Matching System For Creative Projects and Freelance Workers

Project Plan

4th October, 2015

Supervisor: Dr. Vincent Lau

Team Members: Chan Chun On   (Carl)   3035073783
                       Ng Yik Fan   (Ivan)   3035070999

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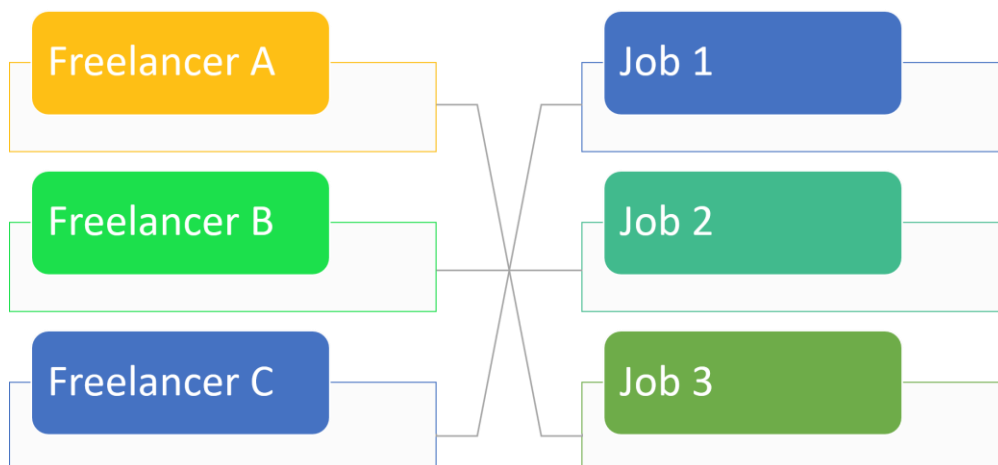**Project Website:** http://i.cs.hku.hk/~fyp15013/

1. Summary

As the creative industry in Hong Kong is facing a problem of lack of freelance job matching platforms, we are going to develop a freelance job matching platform for them. Illustration will be chosen as a startup target. The platform will hold the money from employers in order to ensure that freelancers will get paid. Moreover, both web platform and an Android application will be developed. This platform aims to provide a convenient way of finding creative freelance job and encourage people to participate in creative industry as a freelancer.

2. Introduction

Freelance workers, or freelancers in short, is people who make themselves available to work on particular tasks rather than employed by an employer[1]. The term is usually used to emphasize that they are not company-oriented but task-oriented. Freelance jobs provide several benefits to freelance workers, for example, allows them to work at home with flexible working hours. Freelance workers can also have a higher sense of autonomy on deciding and completing these freelance jobs.

A job matching system should have both information from job provider and job applicant stored in database. The system then can run matching algorithms on these data to provide desirable matches between job providers and applicants. If we apply the system to our project, job provider is the employer and job applicant is the freelancers.

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[1] Oxford English Dictionary: freelancer, n.: A person who makes himself or herself available to be engaged for work on particular assignments or projects, rather than being engaged on a long-term or permanent basis by a single employer.

3. Background

The creative industry in Hong Kong is facing a problem of lack of freelance job matching platform.

There is a large demand of creative works in Hong Kong. For example, the illustration sector covers poster and banner design, illustration for books and novels, logo design, webpage design and even drawings for mobile applications. Especially in the field of drawing, since the duration of finishing a work is short, it is perfectly suitable as a freelance job. Therefore, we have chosen illustration as our platform's startup target.

Although there exists a lot of job-finding-websites such as the Government Labour Department's website, those websites are not considered as job matching platform. Because the systems only let the employers publish their employment advertisement and do nothing about job matching.

Due to the situation of lack of platform, many employers have the difficulty of finding suitable freelancers for the creative works.
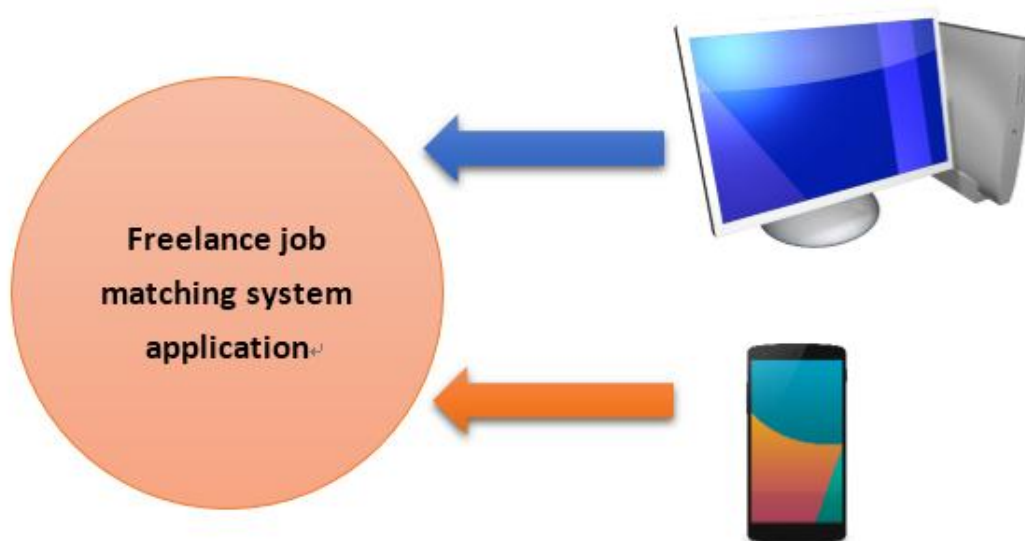
4. Study of Existing Platform

We have studied one of the largest freelancer matching system for creative industry in Hong Kong, called *AnyIdea* (香港創意交易平台). It specializes in simple design such as company logo, name card and posters. The platform acts as an intermediary which hold money from the employer and delivers the money to the freelancer after work finished. This approach can ensure the employer will pay for the work. The platform can also earn some administrative fee in the middle.

A major characteristic of the platform is that they adopt a competition approach which multiple freelancer can apply for the job at the same time but only the winner can get paid. One major advantage is that the quality of work is guaranteed as the employers can choose from a lot of creative works. However this may not be suitable for jobs involving commercial secret since every requirements have to be clearly listed on the job description. Furthermore, most of the applicant does not get paid from their works since they are not the winner, even if they have put a lot of effort in their work.

5. Objective

This project aims to implement a freelance job matching system, which connects a list of jobs and a list of freelance workers by performing matching. The system focuses on creative industries in Hong Kong. We should ensure the freelancers could get reasonable paid after they have finished their works.

Two different platforms, including a web-based user interface (UI), and a mobile application, will be available to users for accessing the system. Only Android mobile application will be developed due to the limitation of manpower in our project group.

6. Key Features of the Platform

6.1 Artist Profile

Normally, the salary of a freelance illustration job is not high therefore it might not be worthy to write a cover letter for every job. To enhance the process of selecting the most suitable freelancer for a job, the platform will introduce a function called Artist Profile. Artist Profile will show the previous works of the freelancer in a clear manner and could function as a CV.

6.2 Acting as an intermediary

To ensure freelancers will get paid after they have finished their work, clients are required to paid full amount of money when the contract is established. The platform will deliver the money after freelancers has finished their tasks.

6.3 Job Notification

Traditional job matching platforms inform users by email. They send job application information and some job suggestions to freelancers by email but most users does not check their email boxes frequently, making the information out-dated.

Instead of traditional email notification, the Android application of our platform can make use of the Android Notification function to inform the freelancers efficiently and give them some useful job suggestions.

7. Approach and Methodology

7.1 Use Case

7.1.1 Main Success Scenario

1. client post a job for free
2. freelancers apply for the job
3. freelancers submit cover letter
4. client choose freelancer on or before the deadline
5. client and freelancer establish agreement
6. client pay full money to us which is an intermediary
7. freelancer start working
8. client and freelancer maintain communication during the working period
9. client satisfy the product from freelancer
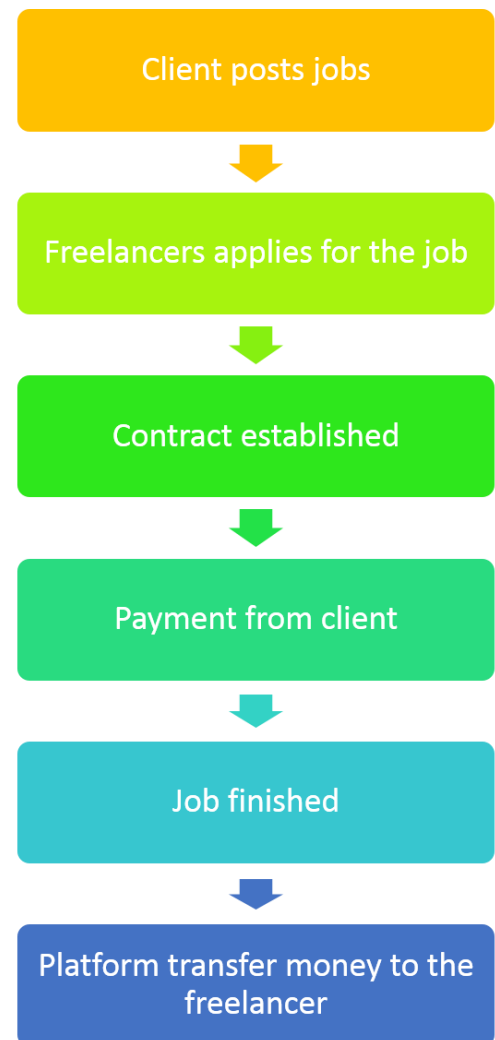10. we transfer money to the freelancer

7.1.2 Extensions

8a. Client wants to add additional requirements and willing to pay for "extra fee" to the freelancer.

1. client asks for the agreement from the freelancer
2. client creates a new "job" available only for that freelancer
3. back to step 5

9a. Conflict: Client does not satisfy the product from freelancer.

1. freelancer / client apply for judgment
2. our staff judge the conflict based on their agreement established
3. we decide the ratio of payment returned to client and freelancer.
4. extra administration free is cost in this situation.

Client posts jobs

Freelancers applies for the job

Contract established

Payment from client

Job finished

Platform transfer money to the freelancer

7.2 Technical Approach

We choose the LAMP stack model for the server, and use Android platform for the mobile application. LAMP is a collection of four free and open-source systems designed for web development, including operating system Linux, web server application Apache, database management system MySQL, and server-side scripting language PHP.

Our application
PHP (server-side scripting language)
Apache (web server application) / MySQL (database management system)
Linux (operating system)

The LAMP stack model

Besides PHP, we also use HTML, CSS and JavaScript as the major computer languages for the user interface. These language cooperate closely with each other and forms essential elements of websites. For mobile platform, we decide to develop an Android application.

Languages	Type of language	Aim
PHP	Server-side scripting language	Implement server-side logic: ● Core functions ● Receive request from client-side ● Generate dynamic contents of web pages (including HTML, CSS, JavaScript) to client
HTML	Markup language	Describe web page structure ● Web page content
CSS	Stylesheet language	Present styles of web pages ● Enhance user experience
JavaScript	Client-side scripting language for web pages	Implement client-side logic on web pages
Java	Client-side programming language for Android	Implement client-side logic on Android Application
XML	Markup language	Layout description for Android Application

These are all open-source software and tools. One major advantage of using open-source software is that they are free, thus reduces cost. It can be highly customizable compared to closed-source software. In addition, huge amount of resources are available for open-source software, which would be a great benefit for self-learners.

8. Risk, Challenges and Mitigation

8.1 Business Risks and Challenge

Area	Impact	Mitigation
Only a few users use the platform	The efficiency of job matching highly decreased	1. Focus on illustration first which has a **bigger market** and **lower payment** 2. more online promotion
Users do not trust the platform who act as intermediary, thus refuse to use the platform	Number of users (including number of jobs and matches available) drops/stays at a low level	1. Allow not to let the platform hold the money when startup. Change the policy when user amount increased.
Lack of capital and resource to maintain the system	N/A	1. Advertisement 2. Service charge when act as intermediary
Service charge of online payments	Limiting the payment methods	1. Use online bank payment 2. Pay additional service charge corresponding to the payment method

8.2 Technical Challenge

Area	Impact	Mitigation
inconsistency between web UI and mobile UI	1. The cost of development and maintenance increases 2. User may feel confused	1. Core functions should be implemented on server 2. two platforms need to follow the same logical flow under the interface level, which will then call the same core functions
Low system extendability	The cost of development and maintenance increases	Construct a modular structure for the system
Online storage space is limited	The storage space uses up if users upload too many pictures	limit the maximum amount of multimedia storage space per account

9. Schedule

Date	Tasks
4th October	**Deliverables of Phase 1: Inception** ● Project Plan ● Project Website
October to November	**System Design** ● Research on freelance works and creative jobs ● Gather user requirement ● System structure design
November to December	**Development of demo system** ● Database design ● Core functions implementation ● Web-based interface design ● Mobile application interface design
24th January	**Deliverables of Phase 2: Elaboration** ● Detailed Report ● First Presentation
January to April	**Extension and elaboration of the system** ● More functions focused on creative projects ● Job matching algorithms ● Optimization, testing and debugging
17th April	**Deliverables of Phase 3: Construction** ● Final Report ● Final Presentation ● Project Exhibition

10. Conclusion

We have introduced a new freelance job matching platform, with the three main features: Artist Profile, acting as an intermediary, and Job Notification. The approach of holding the money from clients could ensure freelancers could get paid. However, this may increases the risk of user refuse to use the platform. We decided to mitigate the risk by not forcing user to use this feature at the beginning.

Finally, we are still considering about the Chinese and English name of the platform. We sincerely wish the new platform could encourage people to participate in creative industry.

~End~