# JuanRun

# **Justin Ryan Ayubo**

Department of Computer Science Ateneo de Naga University Ateneo Avenue 4400 Naga City jayubo@gbox.adnu.edu.ph

# **Rowell Barranda**

Department of Computer Science Ateneo de Naga University Ateneo Avenue 4400 Naga City rbarranda@gbox.adnu.edu.ph

#### Ivan Christian Nacario

Department of Computer Science Ateneo de Naga University Ateneo Avenue 4400 Naga City inacario@gbox.adnu.edu.ph

#### **Eloise Peem Tusit**

Department of Computer Science Ateneo de Naga University Ateneo Avenue 4400 Naga City etusit@gbox.adnu.edu.ph

# **ABSTRACT**

The researchers are proposing a system where busy people will be able to post activities or chores that they need help with and also where job-seekers can provide an online job application for their services. The web-application will provide busy people with a list of part-time job applicants willing to perform the tasks they need help with so they can easily hire a helper and on the other hand, it provide part-time job-seekers with a collection of job opportunities according to their desired working hours. The application utilizes Forms, CSS, and Ruby on Rails for its operation.

# Keywords

Job-seekers, busy people, chores

# INTRODUCTION Project Context

There are currently a lot of people struggling to balance out their time with work, leisure, and responsibilities at home. While there are also people who are constantly searching for part-time jobs to earn a little extra. The gap in between these people is primarily the cause of the problem. Since there are no means of a stabilized platform for communication between the two parties, trying to find each other is a struggle. Naturally, the busy ones don't have the time to search for people who could help them with their tasks or chores. Up until now, one has to listen to the recommendations of friends or the ones they trust to be able to find a helper. Or if not, they'd have to go to an institution which offers the kind of service they need but in return, get a bigger bill. On the other hand, trying to find a part-time job that has a comfortable schedule with a salary that is agreeable is difficult. Aside from the struggle of finding an employer, there aren't a lot of institutions willing to hire part-time workers.

# 1.2 Purpose & Description

The researches seek to implement a web-application called *JuanRun* wherein it will be designed to provide assistance to busy

people in making the process of finding a person that could assist them with chores or work safer and more efficient and to help people who are searching for an extra income find a part-time job.

The users of this application would primarily be the *Juans* and the *Runners*. To be a Juan or a Runner, a user must provide basic information such as full name, complete address, contact number, and bank information. A Runner's registration would involve a category list wherein they would have to choose a specific field of expertise (e.g. Delivery, Cleaning, Personal Assistance, Minor Home Repairs, and etc) and indicate the price for their services at an hourly rate. For security, a Runner can only be officially registered after passing several screenings and requirements. A Runner must provide personal information for background check, NBI clearance, 3 valid ID's, a video interview, and an essay on why they should be accepted as a Runner.

The interface for a Juan will include a homepage where a Juan may choose the category of the activity that they need help with (called a Favour). Examples of these categories are Delivery, Cleaning, Babysitting, and etc. Once a Juan has selected a category, a Juan will be presented with a more specific list of activities like for example if the Juan selects the Cleaning category, the more specific list would include Laundry, Dish Washing, Car Wash, Home cleaning, and etc. After selecting a specific activity, the Juan must now indicate information about the details like the place, time, and other important information needed for the task to be accomplished. After that, the Favour of the Juan will be posted. In addition, the Juan will be presented with a page he/she may view all the available Runners that are eligible for the Favour that they have posted. The Juan has the ability to filter the results according to price of the services, ratings of the Runners, and location of the nearest Runners. Once a Juan chooses a Runner, the Runner will be automatically hired and will report to the Juan according to the time, place, and other details included in the task. Moreover, after the task has been accomplished by the Runner, the Juans may provide ratings for a Runner after they had performed a Favour so that other Juans may be able to find the best Runners at work more easily. On the other hand, the interface for a Runner would include a homepage where a Runner may view the Favours posted by the Juans. A Runner may request to do a Favour posted by a Juan but it will be considered pending until the Juan approves it. A Runner would also have a profile page where his/her basic information and the ratings of the Juans that had hired him/her may be viewed. A Runner has the ability to control his/her working hours by indicating their availability on their profiles which can be adjusted anytime (e.g. Available Mon-Thurs, 8:00am – 6:00pm). The higher the rating of the Runner, the more they will be recommended on the list of Runners for a certain service. Once a Runner is hired, he/she will receive a notification of the details on where, when, and how the task is to be accomplished and the Runner must report to the Juan on or before the time provided by the Juan. The Juans must allot a 15-minute allowance or more depending on the location of the Runner for the travel period of the Runner.

# 1.3 Objectives

# 1.3.1 General Objective

The main objective of the study is to develop a web-application that will enable an environment where people can efficiently find helpers to save time and part-time job offers to earn extra money.

# 1.3.2 Specific Objectives

In order to achieve the main objective, these specific objectives should be followed:

# Provide a connection to the potential employers and employees

 The application will allow users to search and filter through its information for more precise results leading to an easier means to find potential helpers and/or part-time jobs according to their preferences.

# • Provide a list of job opportunities

The application will display different Favours created and posted by Juans that Runners may be able to perform and get paid for.

#### • Provide a collection of resumes

 The application will serve as a collection of job applications from the Runners who can be viewed and then potentially hired by the Juans depending on their availability.

# 1.4 Scope and Limitations

The application, for now, will only be available to the residents of Naga City to assure the security of the users and the performance of the application. Potential registrants of the application should be at least 18 years old and has a bank account that can accept direct deposits. All transactions will be made within the application, specifically through bank transfers, to assure the safety of the users. Also, the exchange of messages will not be included within the application. If the Juan and the Runner need to communicate, they may do it outside of the application using the basic information provided by both parties (i.e. email, phone number, and etc.).

# 2. REVIEW OF RELATED ITERATURE 2.1 Asking for Help

Humans are social beings. Interaction is a need for people which means that people are interdependent and need each other to survive. As a result, people ask for help and receive help from each other almost everyday. However, people want to be sure that

they're going to get the help they need before even asking for it [6]. That is, if people think that their request is more likely to be turned down by someone, they might not ask anymore or just look for other potential helpers [3][17].

# 2.1.1 Why People Seek Help Online

This generation is an era where the web is where people turn to when in need of help because aside from its accessibility, it has a wide range of features and functionalities to satisfy various needs. Like for example surfing google rather than browsing a library or video calling rather than seeing each other in person. Although, there are times that the needs of these people are not just found within the information presented in web pages or within functions in applications but instead found in the help that can be offered by real people [1]. Also, not all the time there are people nearby that you could trust and ask for favors from. Finding people online is considerably more efficient than trying to find someone manually. Because of the availability of online markets, people can just type and search for what they need and they will get results in mere seconds. Not only does it make searching for help easier, it also costs less, and saves a lot of time. Also, requests are less likely to be turned down in these kind of markets because potential helpers are motivated by the fact that they will be paid after accomplishing the task therefore assuring the help-seeker that he/she will less likely be denied of help.

### 2.2 Part-time Job Opportunities in Online Labour Markets

People have different skills and possessions that others need but do not have. As a result, we often ask for help from people who we know is in possession of what we lack. Moreover, the existence of online systems for exchanging goods and services has made it easier to find someone who can help with whatever we need [11]. As a result, it has become a good opportunity for jobseekers to be able to find part-time jobs to earn extra money. Social exchange is a natural element in human interaction where people usually ls transfer valued resources or carry out mutually rewarding actions. According to the study of Suhonen et al, there are three major types of social exchange namely: Negotiated, where two individuals bargain to arrive at an agreement before trade; Reciprocal, where there is no explicit agreement between parties although exchange of goods and services still take place; and Generalized also called gift economies or gift exchange, where there is no direct agreement between parties wherein a people may give resources of some sort to an individual or a group but the recipients may do nothing in return. Since it is easier to locate specific part-time jobs compatible to your skill set in online labour markets, negotiated exchanges are very dominant. Especially with the availability of tasks posted in specific crowdsourcing platforms for a definite price or a specific good, people can effortlessly find a part-time job. Also, people are usually motivated by getting a reward or salary right after work. Part-time job offers are usually given and performed only for a few hours in a day and paid right after compared to the monthly pay day of regular jobs.

#### 2.3 Building Trust in Online Transactions

IT development causes an increase of online commercial activities through the internet that result to the rise of electronic commerce [18]. On the other hand, Electronic commerce is a form of buying and selling of goods and services over an electronic network. Through online exchange, trusting is a risk when it comes to transaction because we are not so sure about the identity of the

trading parties and the quality of the product because identities can be remain as anonymous or they can change it [10] [28].

Buyer-seller relationship is considered as information asymmetry since the product quality of the service is usually known by the seller compared to the buyer that is why building trust is hard [8]. According to Gambetta et al., trust is a particular valuation of a party that another party will perform a specific transaction according to his or her confident expectations in a setting characterized by improbability. Trust can seriously improve the market according to [2], market failure are caused by dishonesty, lack of trust and cheating [12]. Previously, we have mentioned that trust is very important in online transaction so credibility plays major role in positive economic outcome. Their hypothesis is that seller's reputation is reflected through the feedback profile wherein the buyers' can review it and that's the time the building process comes in [28].

# 2.2 Related Systems

#### 2.2.1 TaskRabbit

TaskRabbit is a web and mobile marketplace that safely and reliably connects people and businesses with fully examined people in their community to get every day and skilled tasks done. TaskRabbit basically "employs" its Taskers, the people performing tasks posted, for the safety of the help-seekers. Taskers go through extensive background check to verify their identities to ensure a safe environment and high quality services. [13]

#### 2.2.2 Reboot

The organization propelled in London, its first international market, in November 2013. Thus of decreases in offers and finished and acknowledged undertakings in the U.S.the organization at last chose to street test another framework in London; rather than an e-cove enlivened offering model, Taskers would set their own particular rates and plans, and when another occupation was posted that coordinated their profile, the stage would send them a caution. The first to react got the job. In London the outcomes were overwhelmingly positive: practically the greater part of the organization's measurements notably enhanced, and the normal measure of cash that individual Taskers on the stage were bringing home rose considerably.

#### 2.2.3 Upwork

Another example of a crowdsourcing platform is Upwork formerly known as ODesk is a global freelancing platform where businesses and independent professionals connect and collaborate remotely. This platform focuses from graphic design and software development and completes micro-tasks. Upwork allows tasker to do the task in teams and can post the task they want to provide for free. Upwork receives 10% as a commission and the tasker receives 90% of the payment only when completely finish a task. Upwork guarantees that they will only pay depending on the actual working hours of the tasker. They have this feature called Work Diary which tracks the time and record the work-in-progress given the task providers visibility into project time and progress. [43] Upwork is a global freelancing platform where businesses and independent professionals connect and collaborate remotely.

#### 3. TECHNICAL BACKGROUND

#### 3.4.1.1 Ruby

The web application will be developed using Ruby. Ruby is mostly used in web servers that host a massive amount of web traffic. It is a simple but very powerful object-oriented programming language that is popularly used in creating web applications. Ruby offers components, for example, squares, iterators, meta-classes and others. It can be utilized to compose servers, to try different things with models, and for ordinary programming errands. Ruby is open source and uninhibitedly accessible for both development and execution.

#### 3.4.1.2 Rails

Generally, Rails is a development tool which provides a framework for web development. This framework makes it easy for developers to build websites and web applications through simplifying repetitive tasks. In fact, it is a RubyGem that is introduced utilizing the working framework order line interface. Rails build up conventions for simpler joint effort and maintenance. The Rails Programming interface is archived on the web and portrayed in books, articles, and blog entries.

#### 3.4.1.3 SQlite3 Database

SQlite3 is the default database used when a developer creates a rails application. SQLite is an in-process library that actualizes an independent, zero-configuration, serverless, value-based SQL database engine. The source code for SQLite exists in the general population space and is free for both private and business purposes.

#### 3.4.1.4 Bootstrap

Bootstrap is an adaptable and effective front-end structure that gives a free gathering of devices for making sites and web applications. With HTML, CSS, and JavaScript parts Bootstrap makes front-end web advancement speedier and simpler for responsive, portable first activities. It is free and open source; facilitated, created, and kept up on GitHub.

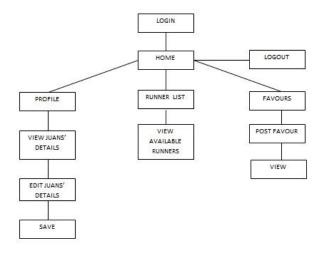
#### 3.2 Forms

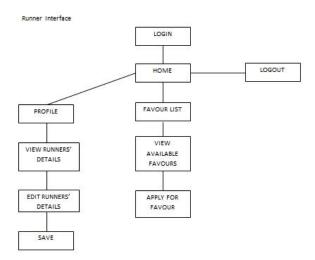
A form is utilized to record data. Forms are created from form layouts or templates. In HTML and in Rails, forms are required when you need to gather some information from the users. For instance a user registration you need to gather data like name, email address, birthdate, and so on.

#### 4. DIAGRAMS

#### 4.1 Webmap

Juan Interface





# **REFERENCES**

- [1] A Bhatnagar et al. "On risk, convenience, and internet shopping behavior." Communications of the ACM. 43(11). 2000. pp 98-105.
- [2] Bradtzaeg, P B, and J Heim. "Why People Use Social Networking Sites." In A.A Ozok and P. Zaphiris (Eds). 2009. pp 143-152. doi: 10.1007/978-3-642-02774-1\_16.
- [3] Blau, P. "The dynamics of bureaucracy." Chicago: University of Chicago Press. 1995.
- [4] Buttle, Francis. Customer Relationship Management Concepts and Technologies Second Edition. 30 Corporate Drive, Suite 400, Burlington, MA 01803, USA. 2009. 5.
- [5] Chen, Injazz J., and Karen Popovich. "Understanding customer relationship management (CRM): People, process and technology." Business Process Management Journal. 2003. Vol 9 Iss: 5. pp 672. dx.doi.org/10.1108/14637150310496758

- [6] DePaulo, B. "Social psychological processes in informal help seeking." In T.A. Wills (Ed), Basic processes in helping relationships. New York Academic Press. pp 255-279.
- [7] D Gambetta et al. "An Examination of the Nature of Trust in Buyer-Seller Relationships." Journal of Marketing (61). New York: Basil Blackwell, Inc., 1998. April 1997. pp 35-51.
- [8] D P Mishra et al. "Information Asymmetry and Levels of Agency Relationships." Journal of Marketing Research. 1998. 35. pp 277-295.
- [9] De Zuniga et al. "Social Media Use for News and Individuals' Social Capital, Civic Engagement and Political Participation." April 2012. 17. pp 319-336. doi: 10.1111/j.1083-6101.2012.01574.x.
- [10] E. Brynjolfsson and M. Smith, "Frictionless Commerce: A Comparison of Internet and Conventional Retailers," Management Science (46:4), 2000, pp. 563-585.
- [11] Emmi Suhonen, Airi Lampinen, Coye Cheshire, Judd Antin, "Everyday Favors: A Case Study of a Local Online Gift Exchange System" Aalto University, University of California, 2014.
- [12] Granovetter, M. "Economic Action and Social Structure: The Problem of Embeddedness." American Journal of Sociology (91:3). 1985. pp 481-510.
- [13] Fangwen Yuan, Jun Liang, Zhaokun Xue, "Crowdsourcing: Today and Tomorrow", Worcester Polytechnic Institute. Degree of Bachelor of Science, 2010
- [14] Jarvenpaa, S.L., and P.A. Todd. "Consumer reactions to electronic shopping on the World Wide Web." Journal of Electronic Commerce, 1. 1997. Vol 2. pp 59-88.
- [15] Katherine Marshall, "Part-time by choice", Spring, 2001, 20-23.
- [16] Langdon, S , and C E Smith. "Quality Expectations, Reputation, and Price." Southern Economic Journal. 1998. (64:3). pp 628-647.
- [17] Lee, F. "When the going gets tough, do the tough ask for help? Help seeking and power motivation in organizations." Organizational Behavior and Human Decision Processes. 1997. 72. pp 336-363.
- [18] M J Shaw et al. "Research opportunities in electronic commerce." Decision Support System. 1997. 21. pp 149-156.
- [19] Mithas, Sunnil et al., "Why Do Costumer Relationship Management Applications Affect Customer Satisfaction?" American Marketing Association. Vol 69. October 2005. pp 201-209. doi: 10.1509/jmkg.2005.69.4.201.
- [20] P. Adler, "Market, Hierarchy, and Trust: the Knowledge Economy and the Future of Capitalism." Organization Science (12:2), March-April, pp.215-234
- [21] Resnick, P , and R Zeckhauser. "Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System." Working paper, University of Michigan. 2001.
- [22] Tim Althoff, Cristian Danescu-Niculescu-Mizil, Dan Jurafsky, "How to Ask for a Favor: A Case Study on the Success of Altruistic Requests", Stanford University, 2014
- [23] Sako, M, and S Helper. "Determinants of trust in supplier relations: Evidence from the automotive industry in Japan and the United States." Journal of Economic Behavior and Organization. 1998. 34. pp 387-417.

- [24] S. Ba and P A Pavlov. "Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior." MIS Quarterly. 26 (3). pp 243-268.
- [25] S Ba et al. "Building trust in the electronic market using an economic incentive mechanism." Proceedings of the 1999 International Conference on Information Systems. Charlotte: NC. 1999.
- [26] S L Jarvenpaa et al. "Consumer Trust in Internet Stores." Information Technology and Management. 2000. 1 (1-2).
- [27] Shannom Sue Scullin et al., "E-relationship marketing: Changes in traditional marketing as an outcome of electronic

- customer relationship management." Emerald Group Publishing Limited. 17. no. 6 (2004). doi: 10.1108/17410390410566698.
- [28] Sulin Ba and Paul A. Pavlou, "Evidence of the Effect of Trust Building Technology in Electronic Markets: price Premiums and Buyer Behavior." University of Southern California.
- [29] Swan, J E, and J J Nolan. "Gaining Customer Trust: A Conceptual Guide for the Salesperson." Journal of Personal Selling and Sales Management. November 1985. 5. pp 39-48.
- [30] Walden, E. "Some Value Propositions of Online Communities." Electronic Markets. 2000. (10:4).