

G-Task: Proposal for Development of a Freelancing Android Based Mobile Application in Bhutan

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Abstract— with the increase in the number of youth every year, unemployment has become a concern in the country. The existing job portal does not seem to address the needs of job seekers who do not have adequate qualifications, as they are often found at home unemployed. Therefore, the purpose of this study is to develop a G-task app which is an android-based online recruitment system allowing job seeker to post and/or search for short term works. The application will help in presenting job seekers’ skills and hence create job opportunities for themselves. A Prototyping Model is used for the software development of this proposed system.

Keywords- Task; Unemployment; Temporary job, Minor income; Android

I. BACKGROUND STUDY

Every year, students graduate from the colleges within and outside Bhutan with the hope of being employed by the government. Ironically, only few out of thousands of graduates receive the opportunity to work in the government sector, as the government is unable to increase proportionate openings. Among this population, few manage to be employed in private sectors, few start their own business, and the rest contributes to the unemployed population. According to the Labor Force Survey Report 2015, there were around 4,503 unemployed youths. For the year 2014, the number of unemployed youth was reported 3681. The study indicates increasing unemployment rate every year (Labor Market Information and Research Division, 2015).Based on the level of education undergone, the unemployed youth population starts from middle secondary to the Bachelor Degree.

The following bar chart represents the total unemployment rate in the past year and the expected rate for the next 3 years.

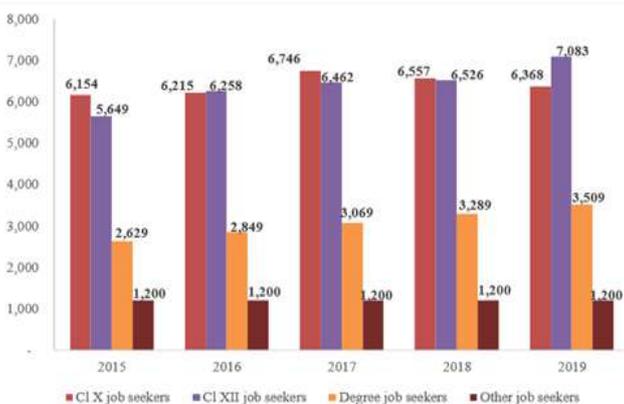


Figure 1 Job Seeker projection till 2019

(Source: Labour Market Information and Research Division ,
LABOUR MARKET INFORMATION BULLETIN 2015,
2015)

II. RESEARCH/DEVELOPMENT THEME AND ITS OBJECTIVE

Even with the help of the existing job portal managed by the Ministry of Labor and Human Resources, job seekers without enough qualifications have difficult time getting recruited. Currently, job seekers are registered on the job portal waiting for jobs, which is web-based. However, some of the youths are still at home without work or a job. Some have the required skills, but not have the qualification and the opportunities while others lack both. Therefore, with the development of “G-TASK” android application, one will be able to keep themselves engaged with temporary tasks and keep themselves engaged. The application would help in showcasing ones skills and thereby creating job opportunities for themselves.

The development of “G-Task” mobile application is to reduce unemployment in Bhutan by bringing job providers and job seekers on a common platform that can facilitate them to interact with each other.

The objective of this project is to develop a mobile application that will enable or connect job seekers with potential employers in the market.

Firstly there is a need to conduct a need/requirement assessment, then design database. After designing the database, design and develop an appropriate app. Finally, need to perform unit test, followed by integration testing as shown in the figure 2.

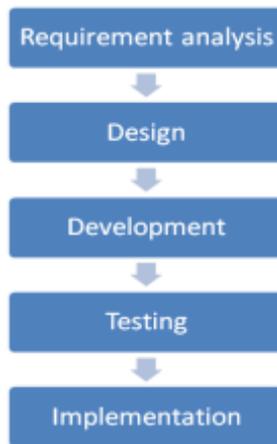


Figure 2 Development phases

G-task will be developed to provide various facilities to job seekers as well to job providers. There will be two main users with different privileges namely Administrator and Users.

a. Administrator

- Admin will be able to post the job availability provided by the job providers.
- Admin will be able to view the task request send by the job seekers.
- Admin will be able to post any job vacancy news on the news feed.
- Admin can either add one or more admin for more efficiency
- Admin can view all the feedbacks and edit his account.
- Admin can search for user profile and their details.

b. Users

- User can post for any short term task.
- User can view all the tasks available.
- User can provide feedbacks.
- User will be able to view all the news on job vacancy.

User will be able to view another user's profile

III. REQUIREMENT ANALYSIS

A. Functional Requirement:

- 1) Administrator has to approve the user (Job Provider) before he can put the vacancies.
- 2) Job seeker should be able to view available job vacancy and select a right and a satisfactory job according to their qualification.
- 3) Administrator should be able to add one or more admin for the effectiveness and efficiency of the system.

4) Job provider should be notified if any job seeker has shown interest in their vacancy.

5) It should have secure registration and login services for both the users (Job provider and Job seeker).

6) A news page where the job vacancies or news could be maintained.

B. Non-Functional Requirement

1) Each post request should be verified through the use of randomly generated token.

2) The app needs to be tested before being deployed in the play store.

3) Better component design to get better performance.

4) Token based security should be implemented to avoid Cross Side Request Forgery.

5) The application should support older version of android OS

6) Images needs to be compressed before uploading to the server to preserve storage on the server and to reduce the network load.

7) Permission should be asked before accessing the resources of the phone.

C. Software Requirement

- Laravel 5.4
- Composer version 1.3.2
- PHP version 7.0.13
- Postman version 4.10.7
- XAMPP version 3.2.2
- Android App Studio version 2.2.3
- SDK version
- OSToto Hotspot
- SideSyn

D. Hardware Requirement

- Laptop core i3+ RAM 4GB+
- Smart Phone android Lollipop+
- USB Cable

IV. METHODOLOGY

Descriptive approach is used to collect data to determine if the objectives of the study were met.

To identify a common problem that is being faced by the people in the country and review documents related to the identified problem and proposed solution. The literature

review will continue from this stage to the stage where the project team will be ready for gathering requirements.

To Review papers and gather enough information about how and what to do for requirement gathering, then move on to requirement gathering phase through various techniques such as meeting and interviewing concerned people, brainstorming and conducting relevant survey.

To analyze the gathered requirements is the next phase. This phase will include refining the gathered requirement.

Then proceed with the designing of the database, app icon, user interface, and system design. The next phase comprise of development of the application where various features of the app will be developed. During the development, every feature will be tested to ensure the functionality of each component. The development of the system will be based on the prototyping method for improving the effectiveness and efficiency of the app and welcome new requirements. In order to ensure the functionality of each component, every component will undergo unit testing. The tested component will later undergo integration testing to ensure proper functioning of the app. If there are any issues encountered during the testing phase, then the encountered issue will be resolved and tested again. In the final phase, fully functional application will be created.

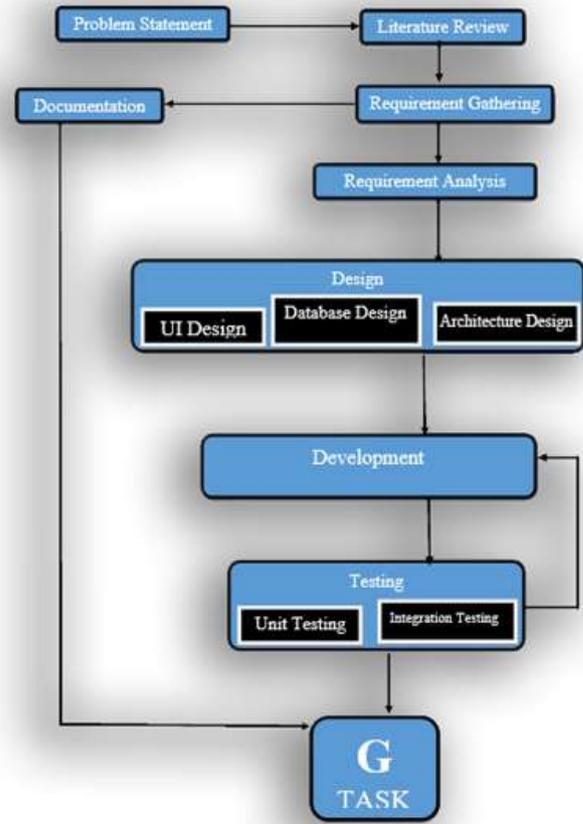
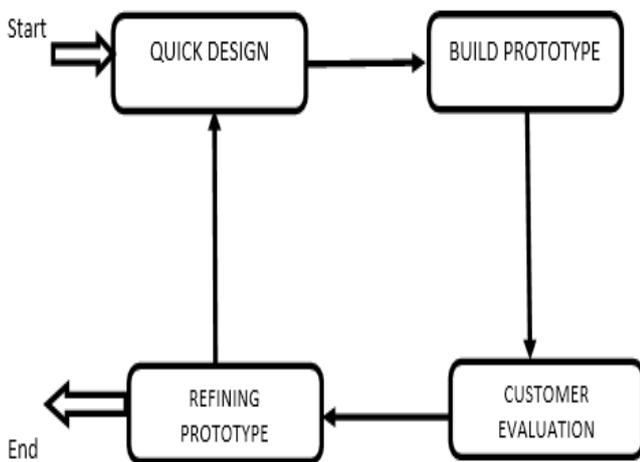


Figure4. Methodology



A. Expected Outcome

The following are the expected benefits if the app is developed:

- a) Income
It will allow users to earn income after accomplishment of every task.
- b) Create Opportunities
Users with commitment and skills may get opportunities to be placed permanently by the task provider.
- c) Reduce Unemployment
Out app will engage unemployed youth to do task
- d) Exploring
The users will get to explore different places, different jobs and new places.
- e) Experiences
The users acquire experience through different types of tasks.
- f) Purpose
The app will provide a purpose to the unemployment youths to spend their time doing a productive work rather than indulging in mischievous activities.
- g) Free advertisement
Unlike other advertisement medium, any task can be advertised without a cost.
- h) Easy to recruit

Many interested users can apply for available tasks through the app, thus providing an easy method for the task provider to recruit the seekers.

i) Task availability

The entire available task will be viewable to the users through the app.

j) Flexibility

Proposed system will provide both the seeker and task provider with short term tasks anytime anywhere.

Opting for task is a very advantageous as one can choose to work as per his/her convenience.

A task seeker need not prepare any document to apply for task. Even a student or a person with a full time job can carry out task during leisure time just to earn few extra incomes.

B. Survey

Data-Gathering Procedures

To understand how effective an online job recruiting system could be, a survey was conducted for two days at Phuntsholing town. The survey was conducted mainly to understand some of the issues faced by the citizens and some of the user's requirement that would help us in developing an App. Data-gathering procedure consisted of two parts. The first part was questionnaire and the second was interview. The survey was conducted at Phuntsholing Higher Secondary School. Out of 100 papers, 57 were distributed to female and 43 to male who helped us in generating a successful result.

The questionnaire actually covered the demographic of the respondent such as sex, whether they own smart phones, how often they use their mobile app that requires Internet? What do they do during their leisure time? Have they ever done part time job? Have they ever heard of an app that would provide short term task? What kind of short term task would they prefer? To understand the user's point of view an Interview was conducted for two consecutive days 25th and 26th to the citizens residing in Phuntsholing. Interviews were conducted with various kinds of people of different professions, for instance local taxi drivers, businessman, officers, teachers, salesman, engineers, and graduates (unemployed).

C. Results of Survey

A questionnaire survey was conducted among students to check the efficiency of an online-job recruiting system. When asked the students if they ever heard of an existing mobile app that could provide temporary short term jobs/ task, only 2% said yes. When asked if they would like to spend their leisure time earning by doing a part time job if there existed an app that would help them get a part time job , 73% responded positively.

Figure 5.1 represents if the users owned Smartphone and 82% of the users said yes.

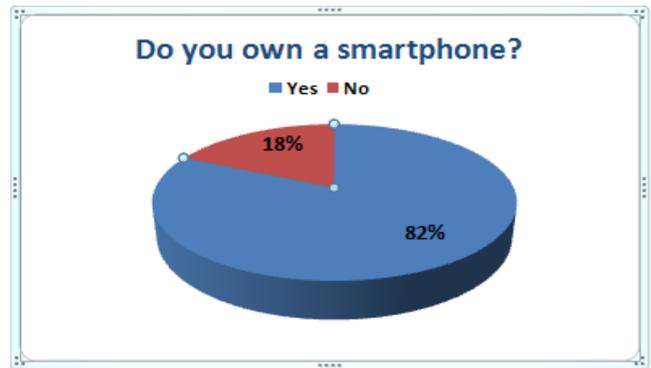


Figure 1.1 Survey and Interview Data, People owning Smart Phones

Figure 5.2 shows the users' willingness to use the app if it is developed and can observe that majority of the citizen is willing to use the app.

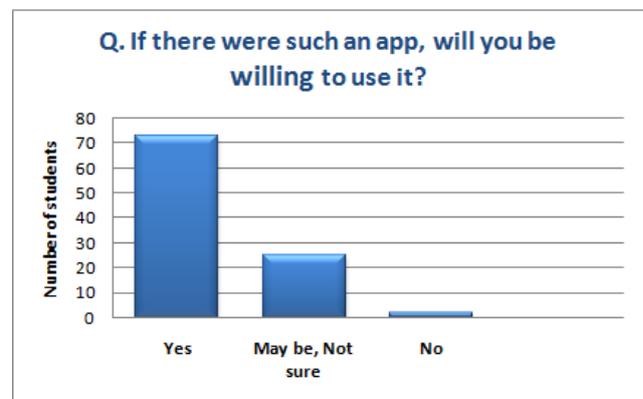


Figure2: Survey and Interview Data, People owning Smart Phones

On interviewing the people from different professional backgrounds, most of them were just high school graduates and 52.5% of them were not satisfied with their jobs and payments and they are willing to take any opportunities. When asked if they would like to have an outsourcing job that they would like others to do for them, they were very excited and the response was very positive.

Figure 5.3 represents the type of OS they were using and out of 100 users, 80% of the users use android.

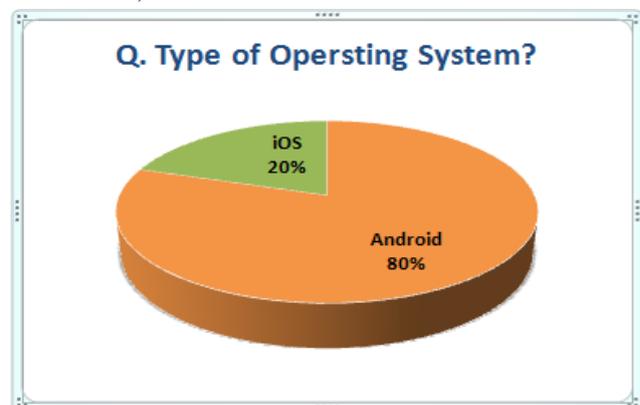


Figure 5.3 Survey and Interview Data, Operating System of Smart Phones Owned

According to them, the only way to recruit people for jobs till date was through friends, phone contact, job marketing, verbal exchange or advertisement.

Figure 5.4 shows if the users were willing to take up an opportunity to make extra income and 77.5% of them responded positively.

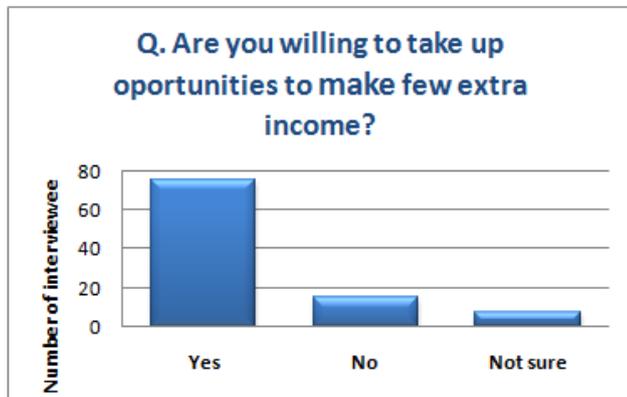


Figure 5.4 Survey and Interview Data: Willingness to Earn Extra Income

Figure 5.5 represents the availability of any outsourcing jobs that they would like others to do for them

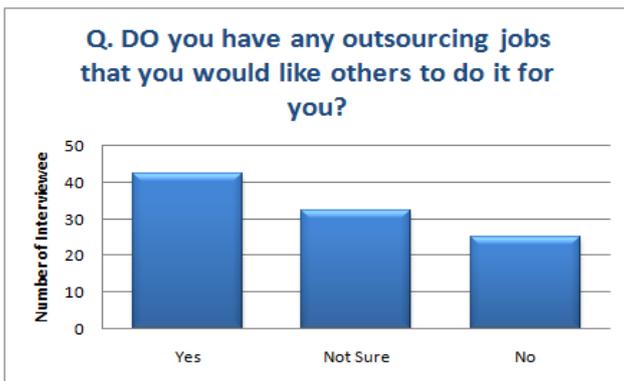


Figure 5.5 Survey and Interview Data, Availability of Jobs to be outsourced

The type of short term tasks that they are willing to take up during their leisure time is:

Lottery seller, Cook, Accountant, Shop Keeper, Hotel Manager, Private Tutor, Private driver, Salesperson. Household, Driver, footballer, Cook, Babysitting, Repairing computer peripherals, Software and OS installation, Delivery, Waitress, Parking fee collector, Painter.

V. CONCLUSIONS

Now that we have seen that there are people who are willing to take up any opportunity to gain work experience and to earn extra income and there are also other people who have the outsourcing job for them. However, there is a high possibility of usage and success if the G-task app is developed. Since

most of the smart phones used in the region are on android platform, the proposed system will be developed using android platform. The development of the mobile application “G-TASK” is necessary. The development of this new app will provide a space for job seekers to interact and find gainful employment. The application will provide opportunity to the students and even to an employed person who wants to make extra income when they have time.

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