Robust Systems Inc.

Development Proposal (draft)

Robust Systems Student Employment Agency

Document Revision 1.1

Issue Date: 05 March 2012

Executive Summary

This document presents the detailed specifications for a system to be developed by a third party software house. This system will implement the functionality desired as part of the Robust Systems solution. A preliminary outline of deliverable components is given in Section 3. The notation and the templates that may be used in the development of this work is given in Section 4. Section 5 details the methods of correspondence that are available for third party contractors to contact Robust Systems Inc.

Disclaimer

Robust Systems Inc. has tried to make this specification as complete as possible at time of printing. Details are subject to change with notice. Feedback and suggestions for modifications are welcome.

Section 1: Robust Systems Inc. Overview

Robust Systems Inc. is committed to providing reliable software solutions at very reasonable prices. Robust Systems has recently won a tender process to create a pilot system for a university student employment agency with the aim of forging close links with the industry.

First, the system allows registered students to find suitable employment on completion of their studies. The system allows companies to recruit students by shortlisting the applicants, arranging for interviews and making job offers.

In addition, the system allows registered students to seek casual employment related to their fields of study. The casual job can be on a one-off basis for a few hours, for a couple of days a week or for a few months (during summer months or internship year). The system allows employers and casual employees to rank each other on completion or termination of their contract. Furthermore, employers are asked to provide feedback on casual employees. Casual employees with a series of bad reports may be deregistered and blacklisted.

Robust Systems Scoping Brief

The Robust Systems Employment Agency is to be a fully digital management system for seeking and finding employment. It will provide secure services to students, employers and administrators to access and manage the data, including:

- The creation and maintenance of records for employers, students, jobs and resumes
- Managing the workflow as the applications for full-time jobs go through different stages of selection and hiring.
- Allow selection of students for casual work based on their uploaded resumes, ranking and skills.
- Allowing employers and students employed on casual jobs to rank each other. In addition it will allow confidential feedback on students employed for casual jobs.
- The privilege for administrator staff to edit, remove and manage employer, job and student records. However, only managers will be granted the privilege to view confidential employer feedback and to deregister students.
- Statistics on full-time jobs offered by job category, location and starting slary..

Section 2: Robust Systems Specification

2.1 Facility Staff

2.1.1 The system must allow employers and existing students to register.
2.1.2 The system must provide access to relevant records for students, employers, administrators and other interested parties
2.1.3 The system must allow administrative staff to manage the records

2.2 Job Management

2.2.1 The system will allow new jobs to be created
2.2.2 The system will allow jobs to be removed by employers (only their own) or administrators.(on expiry)
2.2.3 The system will allow everyone to view the jobs but only registered students to apply.
2.2.4 The system should allow shortlisted students to be informed through emails.
2.2.5 The system will allow selected applicants to choose interview times.
2.2.6 The system should allow students to be informed of the outcomes through emails.

2.3 Security

2.3.1 The system will limit access to employer details to prevent students directly contacting them.

2.3.2 The system must limit access to information depending on the role of the person. Only management staff must be granted access to confidential information and given the privileges to deregister students.

2.4 Job Seekers Management

2.4.1 The system will allow registered students to seek for casual employment (hourly, short-term or internships). All job seekers should be allowed to upload the resume and transcripts.

2.4.2 The system will maintain a record of all past employment details for each student

2.4.3 The system will provide average ranking of students by past employers to prospective (casual) employers.

2.4.4 The employer should be presented with uncluttered screens and easy way to select, offer jobs and provide feedback. The user interface designed should allow an average employer to select job seekers and make offers for casual employment within reasonable timeframe. You should consider the user profile (busy employers) and the type of employment offered when deciding on a reasonable timeframe.

2.4.5 Those completing casual jobs should be allowed to rank the employer.

2.4.5 The system should allow employers to make a time-limited casual job offer (for example, job offer must be accepted within next xx hours). These offers must be sent as emails to job seekers. These emails should include employment details and the average ranking of for that employer so that an informed decision can be made.

2.5 System Management and Performance

2.5.1 The system will be available on a 24/7 basis, with allowable maintenance windows of 1 hour per fortnight.

2.5.2 The system will provide audit trails for all administrative users of the system

2.5.3 Response time should not exceed 10ms in 95% of the cases. It is expected in the initial stage there will be 1000 registered students and 100 potential employers. These numbers are expected to double each year for the next four years.

Additional Specifications (not required for initial submission)

An extension to include (confidential) references from lecturers and tutors

An extension to include referral services that assist disabled applicants

An extension to conduct subject/aptitude tests under staff supervision for shortlisted full-time job applicants

The product owner (your tutor) may also request additional features as a form of feedback.

Section 3: Deliverables

You will be required to show progress weekly to the lab supervisors who will act as product owners and monitor your progress. You may use a form of agile or mixed methodology — it need not be strictly be scrum, RUP, waterfall or XP. You will be required to submit evidence of all team meetings by way of minutes for these meetings. These minutes must report the work completed by each member, the problems encountered and how it can be resolved. These reports (limited to 1 page) must be uploaded soon after the meeting at least one a week from week 3 (there will be a timestamp). No coding is required for this assignment though communication and sequence diagrams can be used to specify the design details to assist the programmer.

The minimal deliverable requirements for final assessment are:

1st Stage: no later than 5pm 28th March, 2012 (10%)
You need not consider the additional requirements at this stage.

- A requirements specification, detailing your understanding of the requirements of the system and user-interface guidelines. This document will set the scope of your solution to the problem. This must include use case diagrams, functional and non-functional requirements. You may also include user profiles.
- A schema for all database tables.
- A detailed architectural analysis model.

2nd Stage: no later than 25th April, 2012 (20%)

- Any changes to analysis model.
- A detailed architectural design solution. The main component of this will be structural and behavioural models for the problem space and a deployment model.
- A final report, consisting of a bound form of all the deliverables.

Section 4: Notation and Process

The models described as part of the documentation will be represented using the UML. You may follow the standard templates provided by Robust Systems Inc. If other similar standards are used please justify your decision. You are also expected to justify all your design decisions (from different perspectives such as performance, maintainability, scalability etc.).

User interfaces will be represented diagrammatically according to standard practice for Windows applications.

Section 5: Correspondence

You can correspond with Robust Systems Inc. via a web-based discussion forum that has been set up for use in this project. This board is located as part of the Blackboard for ISYS 1083/4. The discussion board is called Assignment 1 Discussions". Please endeavour to keep any discussions in this forum properly threaded. Failure to do so may lead to your messages not being seen. No e-mail correspondence will be answered, except in extenuating circumstances.