**CS691 - Computer Science, Fall 2020**

**Project Initiation Document**

Project: JOBSTER

Project Manager: Sanket Sanjay Bunage

Start Date: 08/25/2020

Completion Date:

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# Document Purpose

This document is created to record the layout of our plan to manage the project. In this space we will describe the scope, objectives, tasks, roles and responsibilities, costs and deliverables related to the Jobster website.

The PID contains the following critical aspects:

* Details of the vision and the approach the team will adopt in order to implement the Jobster
* Explanations of the scope and the processes
* Details of the communication plan for the team and the stakeholders
* Assignment of roles and responsibilities
* Details of functions and features for the Jobster
* Details about deadlines for all deliverables
* Assumptions, risks, project controls and constraints

The PID is subject to change during the course of the fall and spring semesters. All the sections of this PID are dynamic and will be updated every time the team makes major decisions or revisits previous decisions. The PID will be an essential reference in all decisions the team makes. At the end of the project, the team will refer to the PID to assess the success rate of the project, evaluate the success of management and to ascertain whether the deadlines for the deliverables were met.

# Background to the Proposed Work

Our Jobster website presents a comprehensive solution to employers looking to hire the best qualified candidates, jobseekers looking for a job with companies that are in demand for their skill sets, and freelancers looking for projects offered on a contractual basis. Jobster boasts an intuitive, visual interface that facilitates both the job finding process and the process of finding qualified personnel. Jobster will have enhanced functionality with separate sign-in for employers and jobseekers.

# Vision

The vision of this project is to provide a platform to facilitate end to end recruitment process. This platform is also used by freelancers to hire employees on contract basis. This application will provide tools and features necessary for job seekers and employers, ultimately providing a one stop, intuitive and unambiguous service.

# 

# Project Objectives

* Create a user-friendly interface
* To create an online career portal that facilitates end-to-end recruitment process
* To cater 3 kinds of users: Job seekers, Employers and Advertisers
* Category based user registration
* To display job vacancies from various corporate organizations
* To allow job postings for verified employers
* Enhancements in the project based on changing requirements and user feedback
* To create a large user base in order to attract advertisers and generate alternate revenue source

# Project Scope

The scope of our project based on technical and functional constraints is as follows:

TECHNICAL

* To apply the best UX/UI practices
* To use the suitable relational database
* To implement agile methodology
* To use suitable IDE for developing the project
* To equip the project team with necessary technical expertise

FUNCTIONAL

* Job seekers will be able surf jobs through various categories and various employers
* Employers will be able to post a detailed job vacancy
* Users will be able to rate the software and provide feedback
* To provide economical deals to the advertisers
* To offer flexible use of application from any part of the world

# Business Case

|  |  |
| --- | --- |
| **Application Name** | Jobster |
| **Type of business model** | Freemium & subscription model |
| **Target audience of external users**  **(Customer Segments)** | Job seekers and employers |
| **Groups of internal stakeholders, users** | Do we need a product development group - Yes  Do we need a sales group - Yes  Do we need a finance group (accounts payable, receivable) - Yes  Do we need a customer support team - Yes  Do we need an advertising management group - Yes |
| **Value propositions** | Application will connect job seekers and various employers at a single place |
| **How the system is used** | Web Application  Within the application, users will be able to surf through and apply for open job positions posted by genuine and verified employers.  Employers can post jobs along with a number of vacancies and can contact job seekers.  The following functionalities are available:  -Premium users (job seekers) will be able to apply for unlimited jobs per day whereas freemium users can send only limited applications.  -Users will be able to sort and filter vacancies based on ratings feedback and can also access the acceptance rate of employers.  -Premium users will get CV evaluation for free.  -Live chat box or callback functionality to address user grievances urgently. |
| **Revenue generation, Revenue streams** | One-time subscription and advertises |
| **Key Partners/Suppliers**  **(Stakeholders)** | Various corporate organizations |
| **Expected Benefits** | -Striking functionalities to establish smooth connection between job seekers and employers and encouraging users for subscription  -Access to all the applied job records at one place  -Having a large user base to attract advertisers. |
| **Known Prototypes** | Monster  [https://www.monster.com](https://www.monster.com/)  Naukri  <https://www.naukri.com/> |

# Assumptions

This section will include assumptions made before the requirements specifications have been documented. It may look something like this:

|  |  |  |  |
| --- | --- | --- | --- |
| Assumption | Validated by | Status | Comments |
| Participation | All team members | Completed | All team members have agreed to put in at least 9 hours a week in the project, counting class time, meeting before class, two meetings per week, independent work on the project deliverables, and communicating with the team. |
| Meeting | Manager | Completed | Team Manager schedules two meetings per week on Zoom. |
| Skills Upgrade | Lead Developer | In Process | Lead Developer will train team members in application development. |
| Project Resources | Lead Developer | In Process | Lead Developer will update the team on the available resources every week. |
| Team will not change | All team members | Complete | All team members will be signing up for Project II in spring. |
| Technology won’t change | Lead Developer | Complete | Once the Lead Developer decides on the technology that we will use, the team will use the same technology. |
| Web space will be available | Lead Developer | In Process | We will be exploring all the options available, including buying the domain and finding a hosting site. |
| Deadlines | All team members | In process | All deliverables will be completed by the deadlines specified in the plan. The completed project will be delivered next semester. |

# Constraints

This section will outline the things needed to be taken into consideration during the delivery of the project; this may include, but is not limited to:

* Limited expertise and previous knowledge in frontend and backend technologies:

The team only has one developer who is conversant in application building frameworks. Other team members will have to learn high-level languages and support him in developing the application.

* Time management:

All members are also a part of other projects in different other courses. Therefore, time management is important for all to meet deadlines of all the projects.

Some members have other classes coinciding with meeting times. Therefore, the team might have to work around it.

* Time zones

Two of our members will be working from India, so there will be very specific time windows where all of us can sit together at a meeting

* Not able to meet in person

Due to the COVID-19 pandemic, in person meetings are not possible or at least limited for the time being. This can become an issue moving on to more demanding weekly deliverables.

# Risk Management Strategy



Risk Identification: Group lists and identifies potential risks that may occur during the project.

Risk Analysis: Prioritizing which risks are most important and detrimental to the project.

Risk Planning: Creating an effective strategy to handle risk before they occur.

Risk Monitoring: Constant monitoring by the project group of most important risks to make sure risk is anticipated before it actually occurs.

This section will include the risk mitigation and management techniques and strategies that will be applied to the project. This may be presented in the following format:

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Probability | Impact | Mitigation Method |
| Scheduling and communication issues | Low | High | Group must be consistent and thorough in communication efforts. Group members must be available for all scheduled meeting times and let project manager know ahead of time if rescheduling is required. |
| Lack of coding/development knowledge amongst team members | Medium | Medium | While lead developer will take control of most development responsibilities, it is expected that all project members will contribute to the overall success of development. Lead developer will spend time instructing others on development aspects, but it is important that all members of group put in necessary time to learn. |
| Quality of project will be unsatisfactory | Low | High | Project members must give input and opinions on overall quality of the product throughout entire process so that changes can be made when necessary in order to design the most effective and efficient application |
| Project deadlines will not be met | Low | High | Project members must make sure that their individual requirements are met on time so that high standards of the project will be met successfully. |
| Project will not have a use in global business environment | Low | Very High | It is very unlikely that a job recruitment platform would ever lose value in global business environment |

# Deliverables

This section should include the main deliverables and outcomes the project is expected to achieve. It may be presented in the following format (see the project delivery schedule on Blackboard):

|  |  |  |
| --- | --- | --- |
| No | Artifact Name | Responsible Party |
| 1 | Project Proposal - Presenting 2 business cases | PM |
| 2 | PID | PM |
| 3 | RACI | PM |
| 4 | BRM Diagram | Product Owner |
| 5 | Context Diagram, System Interface Table | Lead BA |
| 6 | Requirements Types | Lead BA |
| 7 | Business Requirements | Product Owner |
| 8 | Functional Decomposition | Lead BA |
| 9 | RCT | Lead BA |
| 10 | UML analysis diagrams | Lead BA |
| 11 | Data-flow Diagram | Lead BA |
| 12 | Functional Requirements | Lead BA |
| 13 | ER Diagrams (conceptual, logical) | DBA |
| 14 | Database Table Specs | DBA |
| 15 | Data-flow Diagram (physical) | Lead BA |
| 16 | Architecture Diagrams | Lead Developer/DBA |
| 17 | Class Diagram (UML) | Lead Developer |
| 18 | Sequence Diagram (UML) | Lead Developer |
| 19 | Source code sample, executable code ready for testing | Lead Developer |
| 20 | Test plan document | Lead QA |
| 21 | Test design, test cases | Lead QA |
| 22 | Application Demo | All |
| 23 | Final Project Presentation | All |

# Stakeholders

This section will include a list of all known stakeholders and their interests in the project. It may be presented in the following format:

|  |  |
| --- | --- |
| Stakeholder | Interest |
| Employers | Recruiting full time employees |
| Job seekers | Seeking the job |
| Freelancers | Hiring on contract basis |
| INTERNAL STAKEHOLDERS |  |
| Project Developers group | Maintaining and upgrading the software |
| Project Sales group | Managing the sales |
| Project Finance group | Managing the revenue |
| Customer support team | Providing customer support |
| Advertising management group | Promoting the software |

# Project Team

Our team roles and responsibilities are as follows:

Product Owner

Katie Albany

Project Manager

Sanket Sanjay Bunage

Lead Developer

Sri Nikhil Racha

Business Analyst

Ishaan Chawla

DBA

Adam Caragine

QA Tester

Athauda Dias

# RACI Table

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Project Roles** | | | | | |
| **Project Phase** | **Project Tasks** | Project Manager | Product Owner | Lead Dev | Business Analyst | QA Tester | DBA |
| Project Management | Develop a project plan | A,R | C | C | R | C | I |
| Provide cost estimate | A,R | C | C | I | C | I |
| Establish a project documentation portal | A,R | I | C | I | C | I |
| Maintain a project risk and issue log | A | I | C | I | C | R |
| Provide project status reports | A,R | I | R | I | R | C |
| Requirements | Perform requirements analysis | A | R | C | C | I | I |
| Gather business requirements | A | R | I | C | I | I |
| Produce functional requirements | A | C | C | R | I | C |
| Design | Produce high-level design specs | A | I | R | C | R | R |
| Produce data model | A | I | C | R | R | R |
| Produce detailed design specs | A | I | R | C | C | R |
| Coding | Establish a code repository (GitHub) | A | I | R | I | C | R |
| Develop component code | A | I | R | I | C | R |
| Testing | Develop a test plan | A | C | C | I | R | C |
| Establish a test repository | A | I | C | I | R | C |
| Develop test specifications | A | C | I | I | R | I |
| Execute testing, report defects | A | C | I | I | R | I |
| Conduct defect review calls | A | C | C | I | R | I |
| Produce, deliver defect metrics | A | C | C | I | R | I |
| Support test environments | A | I | C | I | R | C |
| Deployment | Produce a deployment plan | A | C | R | I | R | R |
| Produce deployment procedures | A | C | R | I | R | R |
| Deploy software into production | A | C | R | I | R | R |

# Project Plan

Jobster plans to follow agile methodologies, to allow job opportunities for stakeholders, employers during and after each sprint. This collaboration will help them in getting solid monetary gains in terms of advertisements. Whereas, employers and freelancers will get to hire employees for full-time and contract basis which will result in increasing job employment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project Phase** | **Activity** | **Task Owner Name** | **Start Date** | **End Date** | **Progress %** |
| **Project Initiation** | Discuss project proposals | ALL | 25-Aug | 29-Aug | 100% |
| Confirm Project Team Roles | ALL | 25-Aug | 29-Aug | 100% |
| Develop two business cases | Nikhil, Sanket | 25-Aug | 29-Aug | 100% |
| Develop Project Initiation Document (PID) | ALL | 2-Sep | TBD | 46% |
| Produce initial Project Plan, RACI | Ishaan, Katie | 2-Sep | TBD | 25% |
| MILESTONE 1: INITIAL PROJECT PLAN COMPLETED | | | |  |  |
| **Requirements Definition** | Produce BRM diagram, define User Roles | Katie | 15-Sep | 19-Sep | 0% |
| Produce Context Diagram, Define System Interfaces | Ishaan | 15-Sep | 19-Sep | 0% |
| Define Business Requirements | Katie | 15-Sep | 19-Sep | 0% |
| Agree to System Requirements types | Ishaan | 15-Sep | 19-Sep | 0% |
| Define Functional Decomposition | Ishaan | 22-Sep | 26-Sep | 0% |
| Produce RCT document | Ishaan | 22-Sep | 26-Sep | 0% |
| Decide which features to implement this semester | Nikhil | 15-Sep | 19-Sep | 0% |
| Produce analysis diagrams (UML, DFD) | Ishaan | 29-Sep | 3-Oct | 0% |
| Define functional requirements (User Stories) | Ishaan | 29-Sep | 3-Oct | 0% |
| Update Project Plan with additional requirements tasks | Sanket | 29-Oct | 3-Oct | 0% |
| MILESTONE 2: REQUIREMENTS IN PROGRESS | | | |  |  |
| **Design** | Architecture design (2 diagrams) | TBD | TBD | TBD | 0% |
| Database Design (ERD, Table spec) | Adam | 13-Oct | 17-Oct | 0% |
| System Interface Design | TBD | TBD | TBD | 0% |
| User interface design | TBD | TBD | TBD | 0% |
| MILESTONE 3: DESIGN IN PROGRESS | | |  |  |  |
| **Code** | GUI & Functionality Detailed Design | TBD | TBD | TBD | 0% |
| Coding & Implemenation | TBD | TBD | TBD | 0% |
| MILESTONE 4: CODING IN PROGRESS | | |  |  |  |
| Integration & Testing | Plan testing, produce a Test Plan document | Athauda | 3-Nov | 7-Nov | 0% |
| Evaluate Features to be Tested | Athauda | 3-Nov | 7-Nov | 0% |
| Design Test Cases | Athauda | 3-Nov | 7-Nov | 0% |
| Execute Test Cases | Athauda | 3-Nov | 7-Nov | 0% |
| Anaylze Test Results | ALL | TBD | TBD | 0% |
| MILESTONE 5: TESTING IN PROGRESS | | |  |  |  |
| Project Presentation | Prepare Application Demo for the Presentation | ALL | TBD | TBD | 0% |

# Project Controls

* Project Meetings are held regularly and monitored by the project manager twice a week. The meetings are held every Wednesday and Saturday.
* All the necessary discussions regarding the project designs, business models and the distribution of work among the team is done during the meetings.
* Meetings are held on Zoom and the minimum duration of the meeting could be 1 hour.
* The Project Manager is responsible to submit reports to Prof. Chernak and stakeholders.
* There could be a scope tolerance which we agreed among the team regarding the project.
* The entire project base code is maintained in a Git Repository and necessary branches could be maintained.

# Communication Plan

The communication plan for the project can be found below:

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder | Frequency | Type | Purpose |
| Project Manager | Daily | WhatsApp, Zoom Meetings and Email | To discuss weekly goals and keep project team on top of deadlines for deliverables and meeting times |
| Project Team | Daily | WhatsApp, Email, Zoom Conference Calls, Github and Google Drive | To discuss weekly goals, progress on deliverables, deadline strategies, weekly meeting times and ideas for expanding upon project |
| Professor Chernak | As needed | Slack, Zoom Meetings, In-person, Email | To discuss any key issues project team may have and find solutions |
| End Users | During testing phase and after release of project | Email | To obtain feedback regarding the application |