American International University-Bangladesh (AIUB)

Department of Computer Science and Engineering

Faculty of Science &Technology (FST)

Summer 21-22

SOFTWARE DEVELOPMENT PROJECT MANAGEMENT

SECTION : D

PROJECT TITLE : SHORT TIME JOB PORTAL

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TITLE: SHORT TIME JOB PORTAL

INTRODUCTION:

A part-time job is one of the best choices for students to earn their pocket money. The trend of doing part-time jobs for earning is gradually becoming popular among students in Bangladesh. Working part-time, students can bear the educational expenses & support their family, apart from just managing pocket money. Moreover, while doing part-time jobs, students can learn essential skills like discipline, team management, teamwork & acquire knowledge as well. But in our country there is no specific job portal for part-time jobs. So, by this system we can make the connectivity between part-time job seeker and employer. Where employer can post for the job and employee can find the job easily.

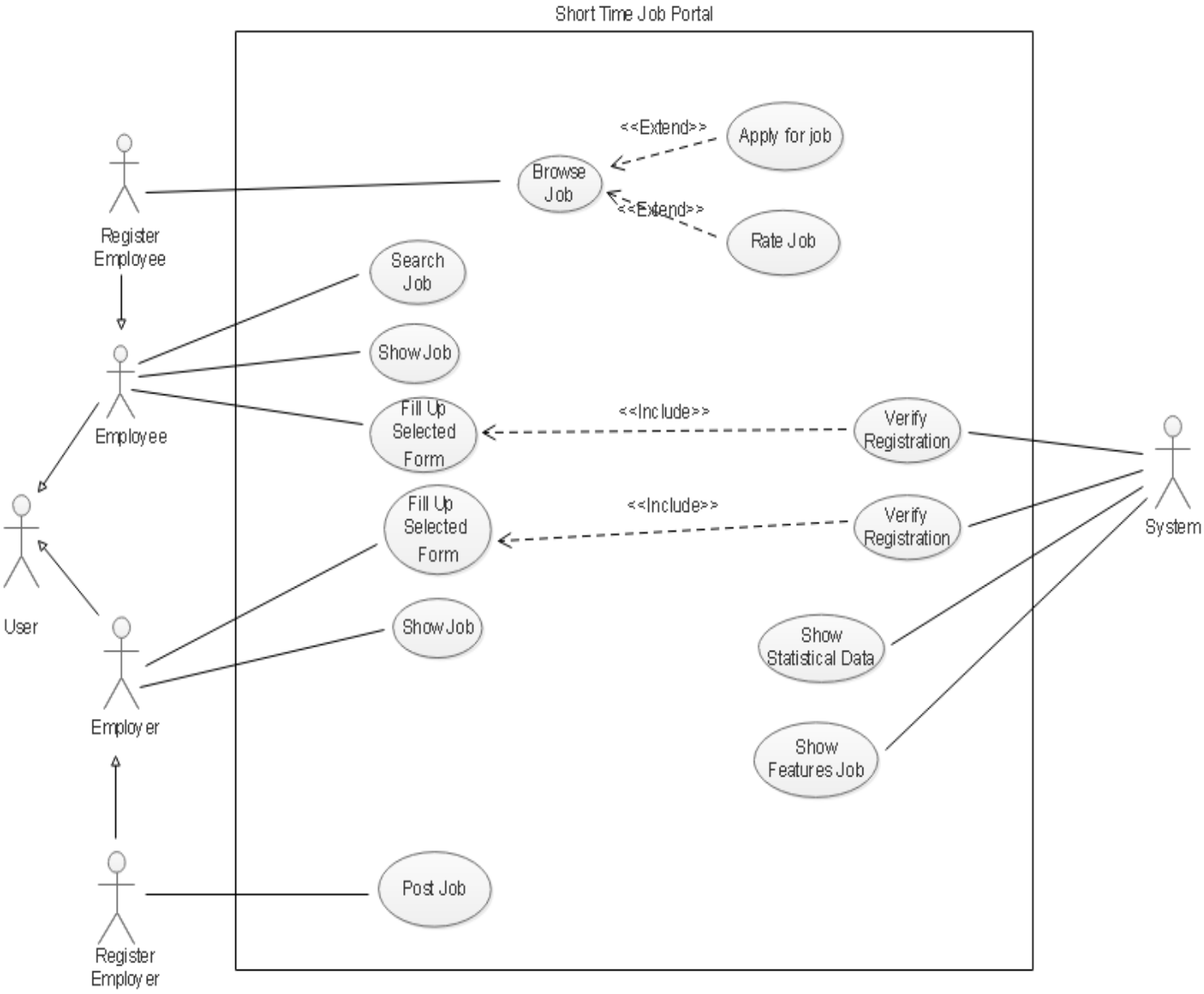
OBJECTIVES:

For doing part time job students needs agency or portal, since there is no specific portal for finding part time jobs in our country. For this they had to face difficulties. So, we have decided to work in this project. After successfully completed this project students will be able to find their desired jobs and the institution who want to hire part time employee, can also find their employees without any difficulties.

JUSTIFICATION:

By our system, job seekers & job providers will be able to meet their desired needs. After successfully completed this project students will be able to find their desired job without any hassle of advertisement. It will help this type of student who need to earn money and continue their study as well as help their family. One of the main benefit of this project are it helps to remove unemployment problem in Bangladesh and this portal will also contribute to the economic sector.

USE CASE DIAGRAM:



In our short time Job portal system there is two type of user

1.Employee.
2.Employer.

But anyone can visit our page . They can search job as well as show job ,if anyone can post for job or apply for job than he needs to fill up the registration from and this from is verify by the system. After successfully verification they become register employee and register employer. Register employee can additionally rate the job .

The system can show the statistical data also the feature data in home page of portal. All of the verification process are also done by the system.

Stakeholder Analysis:

In below we show of all Stakeholders in Short time job portal .In our project there will be different type of stakeholder For example Primary stakeholder ,Secondary stakeholder, Internal stakeholder and external stakeholder.

Primary Stakeholder :

1. Project Manager
2. Developers
3. Analysts
4. Students
5. Tester
6. Business owner

Secondary Stakeholder :

1.Government
2.Board of Youth department.
3.ICT department

Internal to the Project Team:

1.Project manager
2.Functional manager
3.Developers
4.Tester
5.Marketing analyst

External to the project team but same organization :

1.Information Management team
2.Chairman of the company

3.Investor of the project .

External to the project and organization:

1.students
2.Part time workers
3.Womens
4.Contractor involved in the external works of the project.

Feasibility Study:

The goal of a feasibility study is to rationally and objectively identify the advantages and disadvantages of a planned or current business initiative, as well as the opportunities and risks given by the surroundings, the resources needed to move forward, and finally, the chances of success. The cost necessary and beneficial to be realized are, in simplistic terms, the two factors used to assess feasibility. Feasibility Analysis: A project's feasibility study might be determined in terms of technical, economic, or both of these aspects. A report outlining all the project's implications is included with a feasibility study. There are five common elements of a feasibility study: The five categories of feasibility—Technical, Economic, Legal, Operational, and Scheduling are referred to by the abbreviation TELOS.

Technical Feasibility:
A technological feasibility study is conducted to see if the company has the staff, equipment, software, and technical know-how to handle the project's completion. Technically, our project is viable because we use the Laravel framework with PHP and MySQL servers.

Economic Feasibility:
The most popular technique for determining whether a new system is effective is economic analysis. Determine the predicted savings and benefits from a prospective system and compare them to the costs. This process is more widely known as cost/benefit analysis. The choice to develop and deploy the system is made if the advantages outweigh the expenses. Before acting, an entrepreneur must carefully compare the rewards and costs. We discovered that, economically, our idea is quite feasible, requiring less time and money but having more promising consequences.

Legal feasibility:
identifies any potential conflicts between the proposed system and applicable laws, such as the need for a data processing system to adhere to native Data Protection Acts. Even though the payment system we've added isn't officially sanctioned by the government, it's simply there as a demonstration and will be updated with the appropriate local payment options and APIs.

Operational feasibility:
Operational feasibility is a metric for evaluating how successfully a proposed system addresses issues, seizes opportunities, and complies with requirements found during the requirements analysis stage of system development. In our project we think that its full fill the all user requirements so it is operationally feasible.

Schedule feasibility:
If a project takes too long to complete before it is beneficial, it will fail. Typically, this entails evaluating the system's development time and determining if it can be finished within a specific time frame using techniques like payback period. In our project we try to complete is as much as possible so it is feasible for us .

System Component:

The components of a system are any of the parts that are necessary for the system to operate. Our system is Short Time Job Portal. In our system, there will be Registration component, Job component, Employee component, Employer component, Administration component.

1. Registration Component: This the initial component of our system. If any user want to use our job portal then he needs to do the registration at first. After successfully registration he can use the system. There will be registration page and user need to be fill up the page.

2. Job Component: As our system is a job portal, so job is a must necessary component in our system. Any user who are looking for jobs, they can use our Portal and can also find their desired jobs. There will be search option for job where employee can search for job.

3. Employee Component: To make our system interactive employee must be needed in our system. Those people who want to get a job, they are the employee.

4. Employer Component: Employer hires employees. If any company needs any employee for their working purpose then they will register here a employer and provide job.

5. Administration Component: The administration board controls the whole system. They concern about data, security and everything about the system. Their
Main goal is to keep the system interactive and secure.

6.Data Access Component : Where we store all of the database information of the system .

Process Model :

In our short time job portal we are follow the incremental Model .We know that the incremental model divides the system's functionality into small increments that are delivered one after the other in quick succession. The most of the functionality is implemented in the initial increment .

In our short time job portal we first thinking the need of the project in our country than we start a planning. After done planning session we start design our project than done coding ,testing and other works .

In our project in first release we try to maintain all requirement of customer. Than we analysis the customer needs and their satisfaction. If needs any development in project than in second increment we try to update this .We already know incremental development is based on developing an initial implementation exposing it to user feedback, and evolving it though new version. The process activities are interwoven by feedback.

For the development purpose of each increment we follow the incremental model.

Incremental Model Phases :

Requirement Analysis:

In the first phase of the incremental model ,the product expertise identifies the requirements. And the system functional requirements are understood by the requirement analysis team.

Design:

In this phase the increment model of SDLC ,the design of the system functionality and the development method are finished with success. When software develops new practically, the incremental model uses style and development phase .

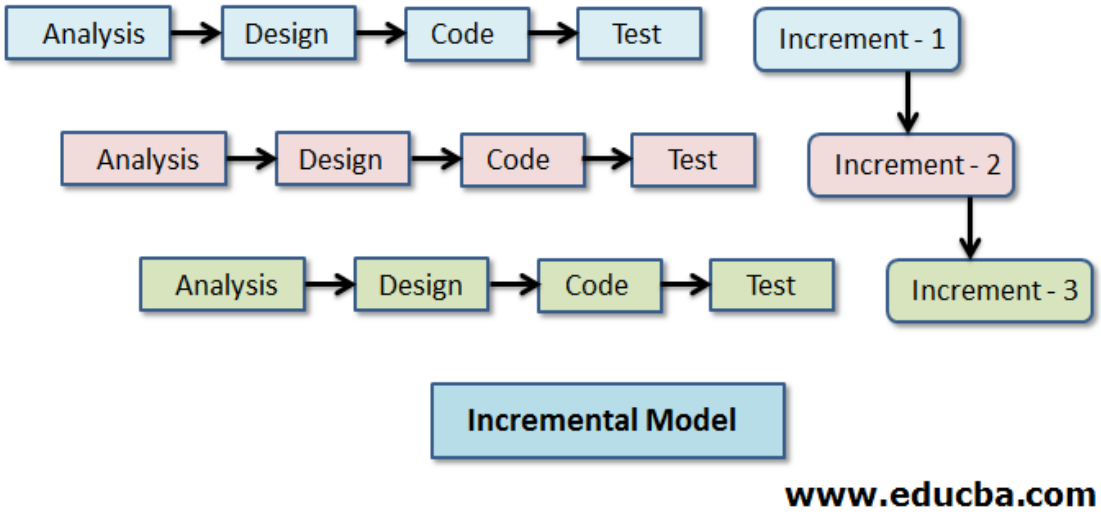
Coding:

Coding of software is done by the developers according to the requirements and design during this stage .

Testing :

In the incremental model, the testing phase check the performance of each existing function as

well as additional functionality. In the testing phase , the various methods are used to test the behavior of each task.



In the above things are development phase of the incremental model and in our project we try to follow this phases . After each increment we try to come out a new feature in our project this are helps the user to meet their satisfaction .

Justification of Model : In our project after first release we try to gather feedback in customer as well as stakeholders .If the stakeholder don't like anything ,everyone finds out a lot sooner . It is efficient as the developers only focus on what is important and bugs are fixed as they arise. After findings bugs and other problems in next increment we try to solve this problem .

We also know that The incremental model is great for projects that have loosely-coupled parts and projects with complete and clear requirements.

In our project we work with job portal and we need to full fill the customer requirements in updating our feature ,come out with new version as well as give extra facilities of user .For this reason we try to follow the incremental model that helps our project make good and also we hope that this project meet the customer requirements.

Effort Estimation :

For the purpose of estimation effort we need to break down of the project follow the work breakdown structure(WBS) to break down the whole project into smaller components. The WBS outline will include the following activities .

1.Project planning

2.Requirement Analysis

3.Design analysis

4.Component design

5.Design Implementation

A) Page creation

i) Security Module design

ii)Application Upload page

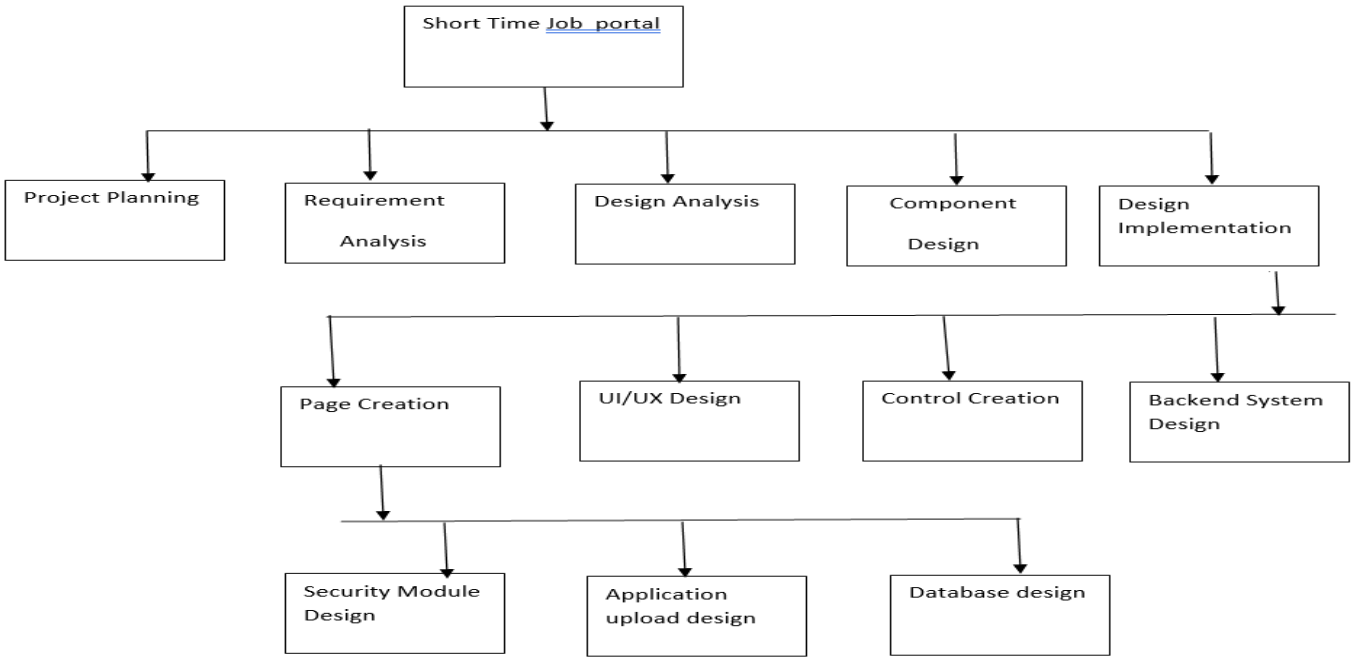
iii) Database design.

B) UI/UX design

C) Control creation

D) Backend System Design

6.Testing



COCOMO (CONSTUCTIVE COST MODEL)

Task	SLOC
Page creation	1600
UI/UX design	1500
Content Creation	1000
Security Module design Application Upload design Database Design	300 250 350
Total	5,000

SLOC = 5000
Coefficient = 2.4

P = 1.05
T = 0.38
Effort = PM = $Coefficient_{<Effort\ Factor>}*(SLOC/1000)^{P}$
Effort = PM = $2.4*(5000/1000)^{1.05} = 13.005$
Development time = DM = $2.50*(PM)^{T}$

$=>DM = 2.50*(13.005)^{0.38} = 6.63$
$=7$

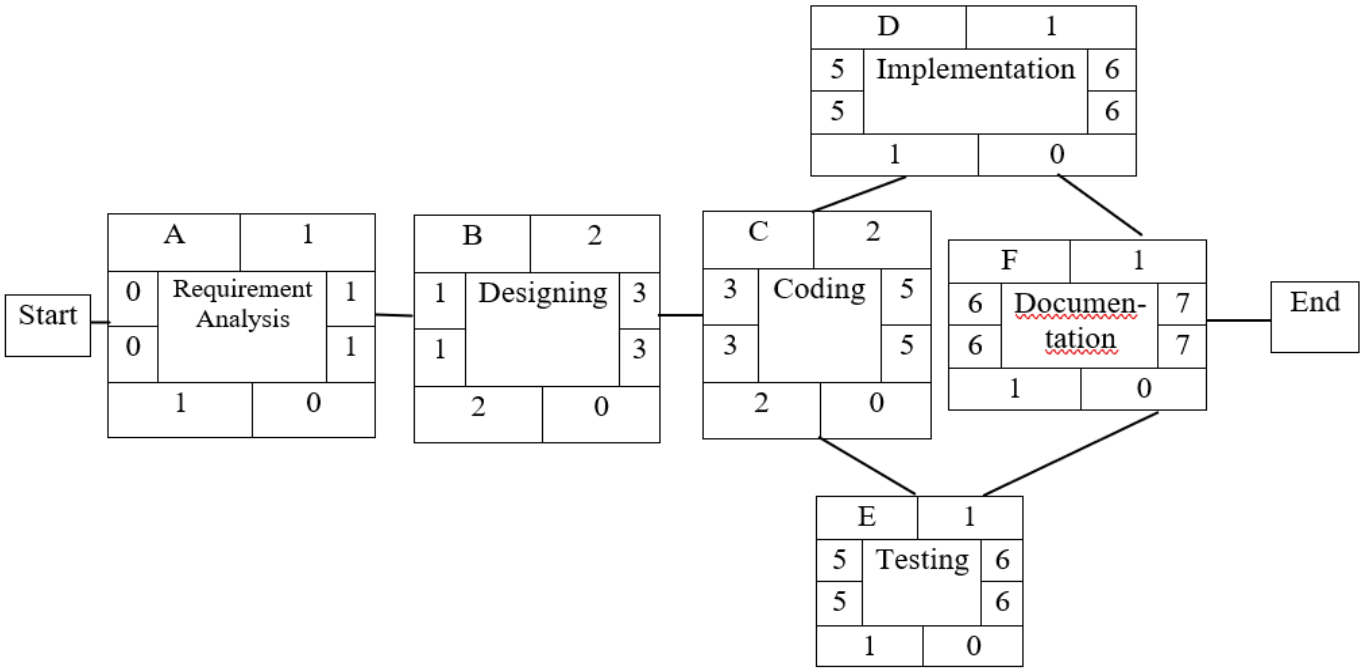
Required number of people = ST = PM/DM = 13.005/7 = 1.85= 2

So there need Two programmers to implement this project .

Project Activity:

Activity	Duration	Precedents
A. Requirement Analysis	1	
B. Designing	2	A
C. Coding Part	2	B
D. Implementation	1	C
E. Testing	1	C
F. Documentation	1	D,E

Precedence Activity Network Diagram:



Project Scheduling :

SHORT TIME JOB PORTAL

Task: Person\Week	Week 1	Week 2	Week 3	Week 4	Week 5
A1: KABYO DEB **A2:** AKIB UR RAHMAN **A3:** KABYO DEB *Milestone: **'A'** Achieved					
B1: AKIB UR RAHMAN **B2:** KABYO DEB **B3:** KABYO DEB **B4:** KABYO DEB **B5:** AKIB UR RAHMAN **B6**:MUSFIQUR RAHMAN **B7**:JANNATUN NUR SHIFA **B8**:AKIB UR RAHMAN *Milestone: **'B'** achieved					
C1: AKIB UR RAHMAN **C2:** AKIB UR RAHMAN **C3:** KABYO DEB *Milestone: **'C'** achieved					
D: KABYO DEB *Milestone: **'D'** achieved					
E1: AKIB UR RAHMAN *Milestone: **'E'** achieved					
F1: KABYOP DEB **F2:** AKIB UR RAHMAN *Milestone: **'F'** achieved					

Activity Key:

A: Requirements Analysis
- A1: Meeting with Client
- A2: Discussion with clients
- A3: Established Product statements

B: Designing /Modeling
- B1: Use Case Diagram Design
- B2: Stakeholder Analysis
- B3: System component
- B4: Process Model
- B5: Feasibility Study
- B6:Network Activity Diagram
- B7:Effort Estimation And Budgeting
- B8:Risk Analysis.

C: Coding Part
- C1: Boundary Class
- C2: Entity Class
- C3: Control Class

D: Implementation

E: Testing Part
- E1: Testing Software

F: Documentation
- F1: Final Presentation
- F2: Final report

Risk Analysis:

There can be different types of risks involved with the project development as it progresses. These risks can be of various categories. So, a risk table is designed for this purpose. The risk table is given below:

Risks	Probability	Impact	Rating	Category
Project Manager Availability	20%	3	Medium	ST
Project team members leaving	30%	4	Low	TE
Programmers don't have experience	20%	3	Medium	ST
Project Cancelled	40%	4	Low	BU
Schedule slips	40%	1	High	BR
External risks	30%	2	High	CU
Unmet expectations	50%	3	Medium	BR
Customer Participation in Beta testing	30%	4	Low	CU
Domain Problem	20%	2	Low	CU
Poor risk management	20%	3	Low	PR
Budget issues	40%	1	Medium	BR

These are the potential risks that are initially noted. However, it is crucial to constantly monitor and regulate the processes to check for the potential addition of new risks and mitigation strategies.

Budget for the project:

Budgeting:

We calculate this budget for our assumption

In effort estimation we find total development time is 7 month.

Total working days = 22*7= 154days = 154*8 = **1232hour**
Salary per hour: **500 Taka**
Maintenance cost per hour: **2500 Taka**

Salary	1232*500=616000/-
Requirement	50,000/-
Transportation	10000/-
Maintenance [for 6 months]	1,25000/-
Utility	1,50000/-
Training & Hardware	50,000/-
Profit [20%]	200200/-
Total	12,01200/-

Conclusion :

Our main target is doing the project is reducing the Unemployment problem and also generate revenue from this portal. Students and unemployed person are get extra helping hand for this project .By this portal employee can find their desired job easily as well as employer can also find the employee without facing any hassle and we think this portal are also generate revenue and its help our economy. If we are successfully complete our project than it will be very beneficial for our society .