SEN TEAM #3

Project Plan

For Online Judge System

Team Leader - Avadhesh Gadia (200901028)
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1/19/2012

The project plan contains an approximate roadmap of the way the project is to be approached and managed. It includes product deliverables, timeline, budget, role and responsibilities of members, stakeholders, assumptions and constraints, development environment, issues, risks and control mechanisms.

Version Summary

Version	Date	Description
1.0	19/1/2012	Initial Project Plan
1.1	5/2/2012	Updated Timeline

Table of Contents

Project Management and Approach

Deliverables:

1)Feasiblity Report

2)Project Proposal

3)System Requirement Specification (SRS)

4)User Manual

5)System Test Plan

6)Project Plan Document

7)Initial Requirement Gathering Document

8)Software Design Specifications

9)Coding Standard Document

10)Test Cases

11)Testing Report

12)Quality Assurance Plan

13)Risk Management Plan

14)The tested final system

Timeline

Sr. No	Task	Commencement Date	Completion Date
1)	Discussion of project problem	4th Jan 2012	10th January 2012
2)	Feasibilty and Project Proposal	11th January 2012	15th January 2012
3)	Project Planning	16th January 2012	19th January 2012
4)	Requirement Gathering and SRS	20th January 2012	10th January 2012
5)	Design Phase	11th February 2012	25th February 2012
6)	Coding, Integration and Implementation	26th February 2012	26th March 2012
7)	Testing(including alpha and beta testing)	27st March 2012	10th April 2012

Organization and Role of Individuals

Sr. No.	Member Name	ID	Role
1)	Asim Banerjee		Guide
2)	Students of Programming Club, DAIICT and others who wish to learn programming		Client
2)	Avadhesh Gadia	200901028	Team Leader
3)	Pankaj Bhambhani	200901047	Student Developer
4)	Chinmay Modi	200901039	Student Developer
5)	Harsh Chawada	200901052	Student Developer
6)	Mukesh Makwana	200901032	Student Developer
7)	Unique Jain	200901036	Student Developer
8)	Arunangshu Bhakta	200901026	Student Developer
9)	Jai Oza	200901014	Student Developer
10)	Anand Mudgerikar	200901056	Student Developer

Tasks and Responsibilities

Sr. No.	Task	Responsibility	Member
1.	Project Proposal		All
2.	Feasibility Report		All
3.	Project Plan Document	Project Management and Approach	Avadhesh, Harsh
		Budget	Pankaj
		Development environment	Unique, Arunangshu
		Issues and Risk Management	Jay, Anand
		Constraints	Unique, Arunangshu
		Monitoring, reporting and controlling mechanisms	Mukesh,Chinmay
		Compilation and review	Pankaj
5.	Requirements gathering and SRS		All
6.	Coding, Implementation and Integration		All
7.	Testing		All

Project Budget

The cost of the project is mainly due to the cost of human resources and other resources such as hardware and software, which would be used to implement the project. For development of the project, open source software would be used which are available free of cost. Hardware costs would be zero as we don't need specialized hardware, the requirements are satisfied by the laptops of the team members and the workstations provided by the college.

Thus, our assessment cost is based on the amount of man hours put in by the team which will be about 850 person hours.

Stakeholders

Our programming judge platform will cherish the opportunity of being deployed on a virtual server or a local college LAN. The target audience is mainly students of Programming Club, DAIICT and people who are new to programming and want to learn programming.

Assumptions

We assume that client has internet connectivity is such that it will allow him to access and submit solutions to the judge. We also assume that the server performs optimally for some definite number of users connected simultaneously, which will become clearer as the project development progresses. We also assume that the project plan may change as new information and issues are revealed.

Development Environment

For the designing part, mainly HTML, HTML5, CSS and django framework shall be used.

The project consists mainly of two parts

1) Server part:

This part shall be mainly involved in the manipulation of the client requests. The entire server platform shall be programmed in python. This is the most crucial portion of the project which will contain various algorithms, which shall be continuously up making changes dynamically.

2) Client part:

Most of the client portion shall be the designing of the user interface. HTML and CSS will be used for designing and python will be used for creating dynamic web pages. The APIs provided by the django shall be helpful to create dynamic web pages and connecting the front end and the back end efficiently.

Issues and Risk Management

- As such type of sites are already present it will be a challenge for us to make a better system with better functionalities. We plan to overcome this issue by providing a better learning experience for the users and make the system more user friendly.

- Due to various unavoidable circumstances it is possible that a group member may not be able to complete the task assigned to him/her. To prevent such factors from affecting the smooth functioning of the project, a piece of work is assigned to a group of individuals (not just one). Thus expected output is achieved by the subgroups working collectively.

- Keeping in mind exams and other academic and technical events taking place, proper schedule feasibility analysis has been done.

- Loss of data or chances of data getting corrupted: to avoid this, a backup of the work done would be continuously be maintained by each member.

- Since the project is being developed in a domain none of the team members have a previous experience in, we speculate that a lot of time would be consumed in background reading. For instance, None of the group members have any experience with python(programming language).

- Disagreement between members is a major issue which could lead to failure to complete the tasks in the period assigned which will affect the efficiency of the group as a whole.

- The requirements of the client can be varied due to which our system may not be able to support all their needs. For this we plan to make our system more flexible so that we can accommodate the changing needs and requirements of the client.

- As the system is being designed for an extraneous client (the programming club) , we have little knowledge about the actual functioning of the system. So testing of the system will be a major issue. So we plan to perform extensive testing and will try to cover all the test cases possible.

Constraints

1. Memory is one major constraint if users with an account are allowed to store any number of uploads for any given problem.

2. Number of languages supported by the platform would be limited.

3. It is not possible to make error checking completely efficient. Also there would be no way to suggest a logical error if any.

Monitoring, Reporting and Controlling Mechanisms

Given the nature of the project, proper monitoring, controlling and regulating mechanisms would be required to ensure the successful completion of the project. The performance tracking and evaluation checks would be done continuously for each of the team members. Proper load distribution and scheduling would help each member to perform to the best of his capability.

To keep the work outputs of the various groups synchronized, a google group for the team has been created. The documentation parts are/would be continuously uploaded on the Internet group. The Internet group not only works as a means for uploading various documents/assignments, it also acts as a forum for all the team members to stay connected, keeping track of the progress made. The documentation work is done on Google Docs for real time sharing and collaboration purposes.

Most of the communication is made through emails which helps in record keeping purposes. A events of a group meeting, client meeting etc. are recorded in log book. A email of log of events of meeting is sent to the group

members after every meet. Moreover, a clarification would be demanded from the team members in case he/she fails to do the assigned work. Besides a periodic review meeting at least twice a week will help monitor the project effectively and efficiently. Meetings would be planned with client as and when the project requires. Beta version of the client would be deployed at client side for thorough testing.

For the coding part of the project the team will be coordinating via GitHub. GitHub is a web-based hosting service for software development projects that use the Git revision control system. GitHub offers both commercial plans and free accounts for open source projects.GitHub would be used as any changes to the source code could be seen by every team member, moreover, keeping the original source code and different versions intact at the same time increases efficiency. The work done would be reviewed and discussed with group members as well as client to analyze whether it meets the desired requirements.

Following the timeline and schedule set, attending the periodic group meetings, discussing with the assigned mentors and TA, the team hopes for a proper regulation of the project.

References

- Django (https://www.djangoproject.com/)
- Github (https://www.github.com)