



আন্তর্জাতিক ইসলামী বিশ্ববিদ্যালয় চট্টগ্রাম
الجامعة الإسلامية العالمية شيتاغونغ
International Islamic University Chittagong

Department of CSE

Project Title
Chat Application Called Affix

Submitted by: **Team Alpha**

Symon Karim (C183050)
A.N.M Ahtesham Uddowla (C191087)
Abdur Rahman (C191111)

Submitted to:

Dr. Engr. Abdul Kadar Muhammad Masum
Associate Professor, Dept. of CSE

Title: Affix

Objective:

The purpose of Affix is to bring together internal communication and collaboration into one place. It makes communication more direct and transparent across the team.

Benefits:

1. Real Time Communication
2. Working Collaboration among team members

Functions & Features:

1. Sign Up/Sign In Using Google Authentication
2. Real Time Chatting
3. Pin Message
4. Emoji
5. Polling System
6. File Sharing
7. Admin Dashboard

Frontend:

1. HTML5
2. CSS3
3. React JS

Backend:

1. Python/JavaScript
2. Django/Node JS

Database: MySQL

Base Software/Site: Slack

Title : Feasibility Study - Chat Application for employee collaboration

Project Introduction :

This project of ours named Affix operates via the web. Mainly the platform will be used for the collaboration of members. The purpose of Affix is to bring together internal communication and collaboration into one place. It makes communication more direct and transparent across the team. Members can invite anyone to become a "connection". Various feasibility studies on this project are described below.

PIECES Framework for our project Feasibility Study :

- **Performance :**

Our system is more reliable, maintainable, affordable and producible. These are the parameters which are considered during design and development of this project. Our site will ease our users collaboration among teammates. Key considerations are,

- a. User satisfaction :**

Our site will ease our users communication lacking among teammates. They can express their thoughts, discuss during work time.

- b. Average response time :**

Average response time of loading every page and the apps of our project will be considered.

- c. Error rates :**

HTTP error %, Logged Expectations and Thrown Exceptions will be minimal because of our development technique.

- d. Request rate:**

As it's a user-based website, it will be handling a lot of requests at a time. Thankfully Django is capable of handling much traffic.

- **Information :**

End users will get information timely(In Real Time), pertinent, accurate and usefully formatted information because of the notification process of our system.

- **Economy :**

Current software will be cost effective to the business. Since there are many organizations or company who want to make their presence in different sites using

advertisements, this site of ours will be an ideal site for them since it's organized, low cost and professionals will be present here.

- **Break even analysis :**

We are expecting in one year, the benefit will be equal to our cost. It can be earlier or delayed by many factors too.

- **Return of investment :**

The whole investment on this project will be returned after benefit in approximately a year or two.

- **Payback period :**

It's almost similar to break even analysis but without the time value of money is not considered. Our payback period will be one year.

- **Profitability index :**

It is the relative profitability of our project investment. It will be measured after deployment of the first version of our project.

- **Control :**

The data will be saved to the SQL server which is safe. The data will be saved to the database only with official data which won't be sold in any means.

- **Efficiency :**

System will be efficient enough to operate on low bandwidth. The browsing and navigation will be faster. The traffic handling won't be much of a problem because the Django framework is delicately built considering these situations.

- **Services :**

System will be stable and reliable and users can trust their data protection from us. The system will primarily be made accurate in consideration with customer feedback.

Software Feasibility Study Report :

Overview & Purpose :

The purpose of Affix is to bring together internal communication and collaboration into one place. It makes communication more direct and transparent across the team.

Scopes :

The uncovered aspects are,

- Live video conferencing
- Email notifications
- Unavailability of mobile version

Requirements :

1. HTML5
2. CSS3
3. React JS
4. Python/JavaScript
5. Django/Node JS
6. MySQL

Risks :

Some of the primary iteration risks are,

- *Technical risks*
- *Economic risks*
- *Budget risks*
- *Political risk*

Timeline : We hope that we can complete this project within 90 to 120 days.

JAD Session

Project Leader

In this session, we are going to discuss our current project that we want to develop which is Affix – A Chat Application.

Now we want to hear about the idea of the project from the Executive Sponsor.

Executive Sponsor

Ok! Affix – provides an online chat application for employees to collaborate with his teammates.

Affix brings together internal communication and collaboration into one place. It makes communication more direct and transparent across the team.

**Project
Leader**

Thank You Executive Sponsor for your information.

Now let's hear about from our manager some opinion on this system.

Manager

Thank you all for joining in this session.

Any team or group can use this system because this is risk free. So from us, we try to make this system best user friendly for the users.

**System
Analyst**

When a user registers for the first time, he/she needs a team to add him in a group. when he/she is added to any team then he can join the team and do the work. Meanwhile Admin can assign job, make schedule for works and deadline. Can add member or remove member and similar stuffs.

**Executive
Sponsor**

Which technology are you using to develop this system?

Developer

We are using HTML, CSS, ReactJS as frontend tool, NodeJS/Django, Python/JavaScript, MySQL as backend tool and PyCharm as a code editor.

**Executive
Sponsor**

What is your plan for about security of this system?

Analyst

This system would not share any personal details, private communication, private chatting history with another user. This system would provide high-security interface and protect their personal data.

**Executive
Sponsor**

Does the system create reusable components?

Analyst

All the data and record that are saved will be reused if needed that's stored in backup.

**Executive
Sponsor**

If reusable parts are used, will there be any effect on the system?

Analyst

No, this system will not be affected if we use reusable components. For developing this system we are using a modular approach, which permits modules to be reused.

**Executive
Sponsor**

Will the system be easy to port to another environment if appropriate?

Analyst

Yes, this system can be transferred from current environment to another environment.

**Executive
Sponsor**

Can you develop this project before the latest technology becomes obsolete?

Developer

Yes, we will try our best to develop this system before the latest technology becomes obsolete.

If we see that any technology has been updated then the system will be improved using the updated technology.

**Executive
Sponsor**

Will this system's user interface improve productivity?

Designer

A user interface allows a user to interact with the system. We will design the best user-friendly user interface so that users can interact more efficiently with this system. Then the system can improve his productivity.

Manager

I think we have understood the system and each of the team members works together to develop this system as soon as possible.

**Project
Leader**

The recorder did you record all action items about this session?

Recorder

Yes, I did.

**Project
Leader**

Okay, everyone. Thank you for joining us in today's session.

Functional Requirements:

- i. visitors can search services, users
- ii. anyone can create a new account
- iii. only registered user can login on to the system
- iv. user can create a channel
- v. on the channel users can add members
- vi. user can join a channel via link
- vii. employee and project manager can communicate with each other
- viii. admin/project manager can control the workflow
- ix. admin/project can set deadline for a particular task
- x. admin can add or remove any user
- xi. admin can create or delete any channel

Non-Functional Requirements:

i. Portability:

- The system can be transferred from current environment to another environment without any modifications.
- The system will load onto any similar server.

ii. Security:

- A verification email is sent to user account when register's for the first time
- User can recover his password with email verification
- Verification time will not exceed 2 minutes
- System would provide high security interface and protect their personal data.

iii. Maintainability:

- The system will be updated gradually without affecting the stored information.
- Find out the weaknesses of this system through regular maintenance and fix it before anyone else detects the weaknesses.

iv. Reliability:

- Storing backup data can increase reliability of this system.
- The system would not share any private messages with other users.
- The system would not share any personal information with other users.
- The system would not share any private transaction history with other users.

v. Scalability:

- System should load in 3 seconds when the number of simultaneous users are > 10000
- Processing of each request should be done within 10 seconds
- Load time of this system would not be more than 1 seconds for users

vi. Reusability:

- All the data and record that are saved will be reused if needed that's stored in backup.
- The system would be developed using a modular approach, which permits modules to be reuse.

vii. Flexibility:

- Users can update their profile without affecting the system.
- As it is a web-based platform any internet user can access it from any device from anywhere.