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Grape

User's Guide

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By:

Group Undefined

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Group Member:

Hunter Lin

Birdy

Listen

Morning

Syachi

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Revision History

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Content

Key Word

Grape
Interaction
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User's guide
Function

Abstract

This document is delivered in order to guide the potential users on how to use our system. A systematic description will be displayed in the following sections, after which the users will easily get along with our system. Meanwhile, if the user forgets some certain operations or functions on our system, we can provide a concrete reference for them.

1. Introduction

1.1. Purpose

This document is written in order to help the potential users to start up on our system (Grape) easily and quickly. We provide a great number of pictures and demonstration, hoping our users may grasp our models and functions quickly and directly. Meanwhile, if the user has some questions on the functions or operations of our system, he may look up in our user's guide document to get more information. We sincerely hope this document can bring our users more conveniences.

1.2. Background

Our developing system is named as "Grape", briefly in hope of leaving our users an initial impression of sweetness and freshness. We also wish our system can help a set of people as a united team where everybody can share their opinions and resources freely.

Our team is named as "Group Undefined", which is simply a coincidence. We wish to build this system to solve the problem of voting in class, and a vote process is to decide the undefined. Our project is simply named after that. (We may also need a voting to determine our team name?)

The developer is also our team, Group Undefined. The supervisor department is the software department of Shanghai Jiao Tong University.

We wish our system Grape will help our users unite as groups tightly and openly.

1.3. Definition

Grape:	Our System name
Group Undefined:	Our team name
User's Guide:	A document guiding users how to use Grape system.
Usage:	The function and purpose of our system
SJTU:	Shanghai Jiao Tong University
Run-time Environment:	The basic running conditions of hardware and software for Grape.

1.4. Reference

Microsoft "BMS White Cover Book"

2. Usage

2.1. Function

a) Create Account

To use our system, you have to log in. And registration is the initial step for data store and interaction.

b) Edit Personal Information

After a user account is created, you can edit your basis information such as nickname and gender.

c) Search User Or Group

You can search other users by their usernames or email in order to invite them to your group. You can search existing groups by group id or group name to join in.

d) Create Group

Group is created for sharing files and casting votes and discussing. You can invite other users to your group.

e) Share Files

The group leader (The one who created the group) has the permission to share files to other group members. When new files are shared, all the members in the group will be notified.

f) Cast Votes

One of the most important functions in our system is to cast votes. Only the group leader can raise a vote to let others to cast. The details can be seen in the use case documents.

g) Discuss Within Group

There is bulletin in the group to display the current condition. And group members can talk with each other.

h) Specialty

✓ Limited Communication For Concentration

We limited the function of chatting in order to make our system simpler and more focused on the function of casting votes and providing important information.

✓ The Conception Of Group

Unlike traditional vote system restricting repeated votes by IP, we used the function of login and created a group instead for long-term and stable ballots and file sharing.

✓ Vivid Result Of Ballot

Our system can display real-time result of ballot. And by analyzing the data collected when casting votes the system can show some statistical diagrams.

✓ Compatibility And Portability

When a user do a query or statistics, the result set is a list of required bugs, we provide a specialty that the color of the bug will be different according to its severity.

2.2. Performance

2.2.1. Time-Concerned Character

The web framework we used is python(flask).It's a very micro framework but has as good performance as larger ones like Php. And the database we used is well-known MySQL, which is efficient and swift.

2.2.2. Flexibility

Since we used website as the main interface, it's out of question that it's portable and has good performance on any platform. We then might develop Apps in particular for specific platforms such as Android and IOS.

2.3. Security

The data in our system shall be protected by cryptographic password. And since our system will be hosted on the cloud provided by enterprises like Ali Cloud Engine or Sina App Engine, it's also protected by the inherent preventive measures of the open engine.

3. System Requirements

In this section, we illustrate as much information in requirements of our system as we can. Typical requirements include hardware requirements and versions, software environments such as running environments and some basic supporting software. And finally the data structures we uses in our system. All of these requirements will be listed as below.

3.1. Hardware

The minimize hardware configuration for running Grape System is as below:
CPU: Pentium 500Hz or above
Memory: 256M or above
Hard Disk: 1G or above
Adopt TCP/IP

The recommended hardware configuration for running Grape System is as below:

CPU: Pentium 866 or above

Memory: 2M or above

Hard Disk: 4G or above

Adopt TCP/IP

3.2. Supporting Software

In order to run Grape System, the following software and their versions are required:

a. Windows 98/2000/XP (Windows 7/8/8.1 are recommended)
b. IBM Websphere (Version 5.0)
c. IBM DB2 (Version 8.1)
d. Client PCs should have JAVA environments
e. Google Chrome 24.0.1312.57 or above(Version 37.0.2062.103 is recommended)

3.3. Data Structure

Our Grape system needs MySQL(version 3.0 or above) to act as database.

The data volume to support Grape System is Stuff Information, thus the customer software enterprise shall provide Stuff Information System as external system to give data our system needs.

4. During Using

4.1. Installation and Initiate

Before installation, we need to do the following preparing:

a) MySQLdb, Python 2.7 and FLASK must be installed on the server.
b) MySQLdb must be always on running.
c) The free space in hard disk is large enough.

Then, we can start initiate the Grape.

a) Your computer or your phone is connected to the Internet.
b) If you are on computer, you can open an Internet explorer and enter the Grape's website.
c) If you are on phone, you can run install package of Grape on your phone.

Currently, Grape is based on website. So it can be easily used without installation on your computer. Sooner, we will also publish our PC version.

After installation, you can do something to initiate.

a) Register your account with your e-mail address or phone-number.
b) Log in and Grape will recommend you several groups to join according to your favor.
c) Join in one group, then address your words, discuss your problem and make your votes.

Enjoy everything on Grape.

4.2. Input

4.2.1. Input Data Background

a) Situation:

  i)   Create a group

     1. When a user needs to form a group and invite someone to attend, he can create a group and fill out some necessary information, using Grape.

    2. The input frequency is random. One user will have some permanent groups like used of class and so on while also have some temporary groups like used of lecture.

    3. All the input tasks are completed by user.

  ii)   Join in a group

    1. When a user wants to take part in a class group or something like it. He can ask for the group number and search it. If he successfully finds it, then he can make an application to the leader. When he join in the group, he can mark his name.

    2. The input frequency is random like creating a group.

    3. All the input tasks are completed by user.

  iii)   Vote in a group

    1. When the leader in the group raised a vote, members can take part in the voting. The leader needs design the vote's content while members are responsible for voting and answering. Votes can be designed into questionnaire.

    2. The input frequency will be high when the group members are active.

    3. All the input tasks are completed by user.

  iv)   Discuss in a group

    1. Everyone in the group can ask and answer question in the Discussion Section. If they have some topic, they can push their view onto the group while others can also comment on it or give some advice. That will be the most exciting and meaningful part.

    2. The input frequency will be high when the group members are active.

    3. All the input tasks are completed by user.

  v)   Bulletin in a group

    1. Leader in the group can set bulletin to inform the members of something important and emergency.

  2. The input frequency may be relatively low.

  3. All the input tasks are completed by leader in the group.

b) Frequency of situation

Refer to part a, at each situation

c) Input Medium

When the user is on computer, he can use the keyboard and mouse to complete all the input work. Keyboard is used to input data and information, while mouse is used to select some requirement and complete control work.

When the user is on phone, he can use touch screen to do all the jobs.

d) Confine

From the factor of security, any access to the data of Grape will be authorized. Any user shall log on Grape first, and then he may have input authorities. Different people have different security levels, generally, leader of a group is relatively high while member is relatively low.

e) Quality Management

In order to prevent user inputting error information, we must check the data user input, we use the JavaScript to check the basic information at client side and carefully check at server side. It means we can decrease the possibility of having fatal errors.

When the input is error, the information will be displayed to the users, the operation will be denied.

f) Dominate

When user input data, the data will be treated at different ways. In the cases of creating groups, joining groups, discussing and voting, the data will be saved to the database if there is no error. The input data won't be saved when user have something wrong on his input.

4.2.2. Input Format

We have some confines for the input format:

a) Length:

Group name/username: less than 20 characters
Date: YYYY/MM/DD
Title of vote/question: less than 50 characters.
Content of vote/questions: less than 150 characters.

b) Format Standard:

i.   Grape doesn't force user to follow the format standard. But we recommend some format standards:
ii. All the input data shall keep with the left of text field, without any blank.

    iii.   The data in the text field shall be composed of alphabet, digit and some usual symbols. Don't input some unusual symbols.

    iv.   The length of data shall not beyond the constraint.

    v.   All the input shall truly reflect the information of projects or bugs in real world.

4.3. Output

4.3.1. Output Data Background

The main output background is as below:

a) Situation:

i) Group List:

The admin is responsible to manage the group's information. He can delete a group. Every time he logs on to Grape and choose to see the groups' existing. He can choose a group to see the actions to verify whether it is invalid or abandoned. If so, he can delete the group according to the principle. After admin has done this update, the Grape will display updated groups list that is the output of project management.

ii) Member List:

The group leader can manage the group members. He can add, delete or invite a member. While he manage the members, Grape will show him a list of members in the group. He can choose to add someone to the group, delete someone from the group or invite somebody to join in. After any modification, the Grape will update the database and display updated member list.

iii) Vote Chart:

When a vote raised by the group leader finishes, the results can be reflected in a vote chart. He can see the differences and the statistical data from the chart directly.

iv) Account List:

The admin is responsible to manage the users' information. He can create, delete and edit a user's information. While he manage the users, the Grape will show him a list of existing users. He can select one to edit or delete or create a new one. All the three works would update the database. After the management, the account list would be updated.

v) Bulletin View:

All users can see the bulletin when they log in and choose the group. The group leader can create the bulletin or delete certain one. After creation, the data about it in database would be updated. The new bulletin view would be shown in the group.

vi) Discuss List:

The users can discuss the posted problems in the group. When they want to discuss the problems or read the discussion, they would be displayed the discuss list. They can choose a

problem to see the discussion and edit their own answers. The changes will be reflected in database. The new discuss list would be displayed after the modification, too.

vii) Message List

The users sometimes need to receive some news broadcast by the Grape. When they choose to see them, the messages would be displayed. Users can get news from it and can delete the useless one from it.

b) Situation Frequency:

i) Group List:

When admin manage the group, he can see the group list.

ii) Member List:

When the group leader manages the group members, he can see the member list.

iii) Vote Chart:

Every time one vote finishes, the output can display to the leader.

iv) Account List

The account list occurs at the time admin manage the users.

v) Bulletin View

Every time users log in to the Grape and enter the group, the bulletin view would be shown.

vi) Discuss List

When users wants to discuss the problems or see the discussion, the discuss list would appear.

vii) Message List

When users check the news from the Grape, he would see the message list.

c) Output medium:

All the output is through the screen so that user can see it directly. If user wants to print it, the output can be typed through printer and showed in paper. User can also save the output the store medium like hardware, disk or CD-R.

d) Quality management:

Before the output occurs, Grape checks the data and the internet connection. If there is exception, the output stops, the error information will be returned to user. This method prevents the system from fatal errors, so that Grape can decrease the possibilities of giving user error information.

e) Dominate:

All of them would be saved even when the Grape is power off because of they all are determined by database

4.3.2. Output Format

We have some confines for the input format:

a) Index

Index should contain basic information for different kind of users.

i. For those who has logged in, index should contain some information about their groups.

ii. For those who has not logged yet, index should contain basic introductions to our project.

b) Voting page

Voting page should perform different output for different users.

i. For group leader, he can see the info of the vote, and has a button to end the vote immediately.

ii. For group members, they can choose vote selections.

c) Asking page

Asking page should contain title and text of the question, and answers.

4.4. Query Document

Grape has capacity of querying:

a) Join Group:

Users may want to join some existing groups, Grape provide them with subsystems. They fill a table of the name, ID or category of the group, Grape starts to search the qualified groups. Grape translates the input to SQL language and sends it to database, and then the database searches the records according to SQL language.

b) Query Account/Group:

When admin want to check the information of some user or group, he can type the relevant information to submit to the Grape. Then the Grape would send it to the database. After database finishing the search work, it returns the information to Grape, then Grape completes the statistic works and shows the relevant accounts or groups to admin.

c) Answer Problems:

When users specify the files or the discussion, the Grape responds to it by querying corresponding ID and gets the information from the database. Then the Grape returns the results to the users.

d) Vote:

When everyone submits the vote, the system specifies the vote in the database by querying. Then the specified database would update its information. When the vote finishes, the result will be returned to the leader in the form of chart.

4.5. Exception Management

Grape will come to exception while running. The exception conditions are listed as below:

a) The user input error data that Grape can't find, while Grape execute them, exceptions come out. In order to ensure the system can continue running, BTS will return error information to remind user and require user to input again.

b) If the database cannot be connected, the user would be reminding to reconnect or give up the operation.

c) If the files users choose to download is just deleted, the Grape would respond the error warning – "the files don't exist".

d) If the internet is not available, the "the network is not available" would be displayed instead of functional view in order to prevent old message or error message from being showed.

4.6. Terminal Operations

Grape has a distribute architecture. The server provides all the service to client PCs. All the client PCs shall do is connect to the server and then interact with other clients. The client PC should use web browser, entering the server's IP and connect the server website in order to interact with others.

Users sent all the commands and information through net. The server responses the commands and information, executes them and the control them to be sent to the right place. Then the results are returned to users or groups which are also through net.

Because of our software have high security level, the user cannot visit the database directly. User can only interact with the webpages. The tasks are done by Grape automatically and they are invisible to users.

5. Conclusion

This document gives our users a vivid view on the operations and functionalities of our Grape system. Since this document is aimed to serve for our end user, so we try to include more images and guide pictures as a direct and easy-to-understand way to help our users start up. Moreover, we described all the functionalities in our Grape system, users may look up our document to find a certain function.

Hope our guidebook may bring them a clear view on our Grape project!