CrowdFunding

--- Online Investment Platform

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Project Description

The goal of our project is to implement an CrowdFunding platform where Investors and startups can meet each other. For aspect investors, they will be able to search project and invest the project they interested. For aspect funders of project, they will be able to publish their project and raise funding. The web application is power by Java EE platform including Tomcat web server, Java servlets, web pages implemented with JavaServer Page (JSP). A relational database is built to store information about users,projects, messages and other required objects. The database is implemented on MySQL database server and can interact with our Java web application through Java DataBase Connectivity (JDBC). The raw data used for testing is captured by using a self-developed web crawler, written in php and simple_html_dom library. A relational database is built to store information about users, projects, investments and follows.
Github url: https://github.com/leohihimax/CrowdFunding.git

Project Rubric

	#files
Pages	19
Relational Model/Dao	16
Servlet	12
CSS/Bootsrap	2
Others	1

Technologies:
Database Technologies: MySQL, JDBC, JPA
Web application technologies: Java Servlet, JSP, Javascript, jQuery, Ajax, HTML5, CSS3

UML Class diagram:

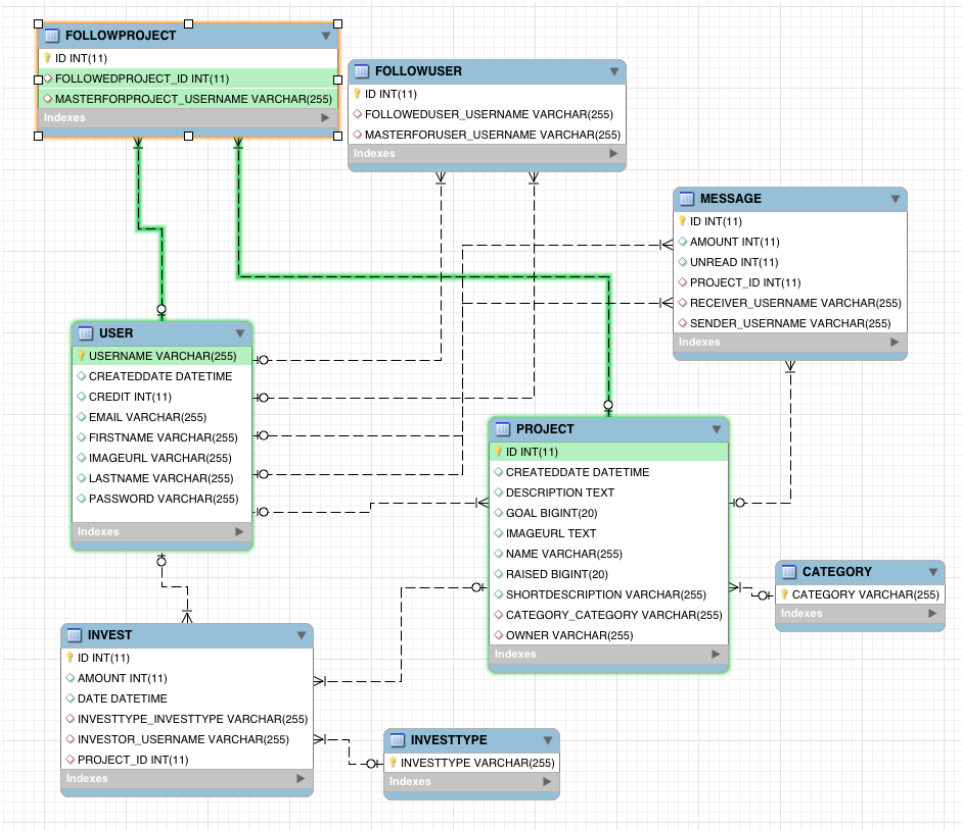

Figure 1: UML Diagram

The local database of this project will store relevant data about User, Project, Invest, Message, follow Relationships and Category. The graph below is the demo layout of home page.

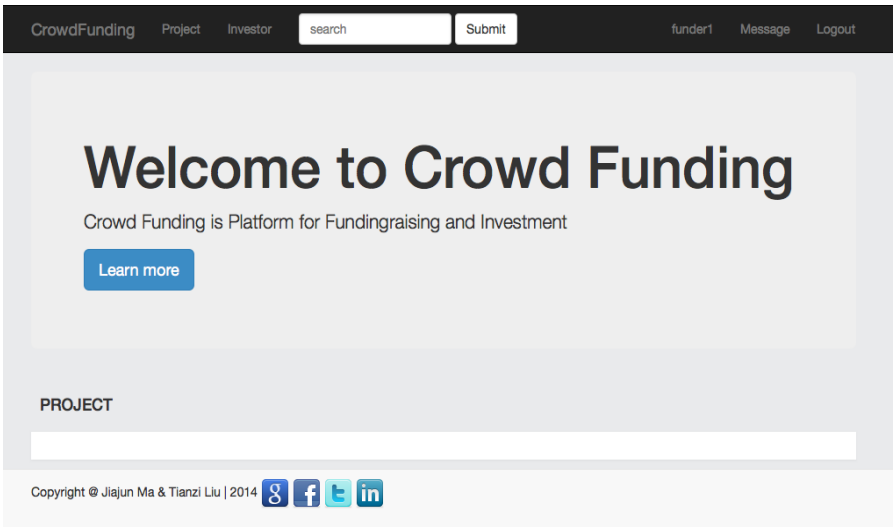

Figure 2: HomePage demo

Use Cases Lists:

	Use case list
1	Create an account
2	Sign in
3	Display current trending businesses.
4	Display active investors.
5	Create a new project
6	Publish a project
7	View user's current trending state
8	View user's funding record
9	Search projects using project name
10	View project in details
11	Invest a project
12	User can edit their profile page
13	User can follow other user
14	User can unfollow other user
15	User can follow a project
16	User can unfollow the project
17	Send message to funder when his project be funded
18	Receive message when his/her project been funded

The detail of each case has been listed in the references.

Future Goal

Add some RESTful APIs to our project:

1. Stock market API
2, Implement the JWS for our own database(We developed the source code, but not put in our project yet)

References:
Source code: https://github.com/leohihimax/CrowdFunding.git

Use Cases:

1. **Use Case: Create account**

   Description: The create account use case allows user to create a login and become a registered user

   Actor: User

   Precondition:

Actor actions :	System responses :
User enters required user account information	System validates the entered User information
Alternative Path:	
User cancels request	Then the processing is discontinued, the user will be notified the request has been canceled
Invalid input of user account information	1.The system prompts the User to re-enter valid information 2.If the valid information is entered, the information will be stored. 3.If Invalid information is entered again the process 1 will start again.This continues until valid information has been entered or User cancel the request.

2. **Use Case: Sign in**

   Description: Registered User sign in their account.

   Actor: User

   Precondition:

   User account is existing.

Actor actions :	System responses :
User access the sign in feature	System prompts the User for username and password
User enters username and password	System checks the Username and password, and valid one user account.
User Sign in.	System display a message sign in

	success.

Use case end.

Alternative Path:

New User	if the user doesn't have a account, system will give the user option to create a account.
User forgot username/password	System will promote user to answer security question. if answer is correct, the username and password will be emailed to User's email.
User fails authentication:	1.The system prompts the User to re-enter the valid information. 2. The system suggestion for sending request of forgot username and password. 3, Repeat 1 and 2 until valid information entered or user canceled request

3. Use Case: Display current trending Project

Description: The user will be able to list all trending project provided that provided by the system

Actor: User

Precondition: User existed.

User Actions	System responses
User send request.	The system will search and display all current trending project.

Alternative Path

There is no current trending project	System will display message to tell user there is no trending projects now.

4. Use Case: Display Registered Investors

Description: User will be able to list all Registered Investors-Users

Precondition

User existed.

User Actions	System responses
User send request	The system will search and display all activity Investor.

Direct search by distinct criteria.	The system validates the enters, if Invalid, the system prompts re-enter request. If valid the system will display matched Investors.
Alternative Path There is no activity Investors	System will display message to tell user there is no activity Investors.

5. Use Case: Create a new project

Description: User can create their own project.
Precondition:
User existed

User Actions	System responses
User send request to create a project	The system valid the entered project name and stored it into database.
User enters the project name.	
The created project is stored in the user account.	The system will info user the project has been created successfully.
Alternative Path: User cancels request.	Then the processing is discontinued, the user will be notified the request has been canceled.

6. Use Case: publish a project

Description: User is be able to publish a project.
Actor: User
Precondition: User exsted

User Action:	System responses:
User send request to publish a project	The system will update the states of project as public, and display a message the project has published.
Alternative path: User re-publish the project	The system check the project the states and display a message show projects has published before.

7. **View user's current trending state**

Description: Web display the user's current trending project state in user's home page.
Actor: User
Precondition: user has trending projects, user authenticated.
Step:

Actor Actions:	System responses:
User login to their homepage	system display the user's trending projects
Alternate path:	
User has no trending projects	system do not display anything

8. **Use Case: Display funding record**

Description: Web display user's funding record in user's home page
Actor: User
Precondition: User has funding record, user authenticated.
Step:

Actor Action:	System responses:
User login to their homepage	System display the user's funding record
Alternate path:	
User has no funding projects	System do not display anything

9. **Search Project using project name**

Description: User can search the project by project name
Actor: User
Precondition: Project exists

Actor Actions:	System responses:
User submit the project name	System display the project content
Alternate path:	
Project name does not exist	Error message: project not found

10. **View the project in detail**

Description: User can view the project in detail
Actor: User
Precondition: project exist

Actor Actions:	System responses:
User click the project link	System display the project in detail like description, image, video and state and faculty
Alternate path:	
project does not exist	Error message: project not exist

11. Invest a project

Description: User can invest the project
Actor: User
Precondition: project is trending, user authenticated.

Actor Actions:	System responses:
User chose different funding product for the project to fund	system display funding success
Alternate path:	
User doesn't have enough credit to purchase the funding product	Error message: Credit is not enough.

12. Edit their profile page

Description: Users want to edit their account profile
Actor: User
Precondition: user is authenticated

Actor Actions:	System responses:
Users open their profile and edit it, then save the updated profile	system accept modification and save it
Alternate path:	
User cancels request	Then the processing is discontinued, the user will be notified the request has been canceled
Invalid input of user account information	1.The system prompts the User to re-enter valid information 2.If the valid information is entered, the information will be stored. 3.If Invalid information is entered again the process 1 will start again.This continues until valid information has been entered or User cancel the request.

13. Follow other user

Description: User can follow other user
Actor: user
Precondition: user is authenticated

Actor Actions:	System responses:
A user can go to B user's profile page, then click the follow button.	The follow button become un-follow button

14. Unfollow other user

Description: User can unfollow other user

Actor: user
Precondition: user is authenticated,
user has followed other specific user

Actor Actions:	System responses:
A user can go to B user's profile page, then click the un-follow button	The un-follow button become follow button

15. Follow a project

Description: User can follow a project
Actor: user
Precondition: user is authenticated

Actor Actions:	System responses:
A user can go to a project page, then click the follow button	The follow button become un-follow button

16. Unfollow a project

Description: user can unfollow a project
Actor: user
Precondition: user it authenticated
user has followed the specific project

Actor actions:	System responses:
A user can go to a project page, then click the un-follow button	The un-follow button become follow button

17. Send message

Description: when user invest a project, the system will send a message to the project ower.
Actor: user
Precondition: user has enough credit

Actor actions:	System responses:
user invest a project	send a message to the project owner

18. User can receive message

Description: when the project is funded by other user, the project owner will receive a message
Actor: user
Precondition: user's project is funded by other users

Actor actions:	System responses:
user open the message box	message box shows unread message