**2nd Website Design Report:**

**IndieGameDevZone.com**

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# Development of an Indie Game Developer Social Site, IndieGameDevZone.com

## Team Members

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## Motivation

Many sites exist online to help people collaborate on software and team projects, yet they fall short on a missed demographic. Independent game developers, in particular college students, are full of great ideas. Here at UTD many such students have trouble getting their project noticed. Ultimately many of these projects end up being put on indefinite hold after they exit college.

We intend to design a website, [IndieGameDevZone.com](http://IndieGameDevZone.com) (domain pending) that brings these student developers together and helps them gain the visibility they need. With our site they will sooner attract fellow students to assist them on their projects, as well as the eye of potential investors.

### Some Examples

The websites researched that are similar to our website’s goals are:

[Kickstarter.com](http://www.kickstarter.com) – This is an amazing resource for any new business or project team to raise some capital and attention to their work. Our website will be on a much smaller scale (for now), but ultimately this is who we hope to be for game developers specifically.

[igf.com](http://www.igf.com) – The website for the Independent Game Festival is a great way for new developers to get word of their game out. The IGF has hosted such games as *Audiosurf*, *Minecraft*, and *Narbacular Drop,* the precursor to Valve Software’s *Portal*.

[indiegamereviewer.com](http://www.indiegamereviewer.com) – A host of game development news and aggregated blog posts.

## Users

Our initial target audience is the students here at the University of Texas at Dallas. The site will advertise projects to users majoring in Arts and Technology, Business, Computer Science, and others with interest in video game development, and to bring them together to successfully complete their projects to present to the school and industry.

Our user types are: registered users, non-registered users or visitors, video game companies, and other partners of the website.

### Registered Users

The primary user will be young indie game developers who need help gaining attention and project members. Project portfolio pages are created by registered users, and are unique to the project. Project pages include a list of all project members, and a registered user may have more than one project page they belong to.

Registered users may also comment upon other users’ projects, leaving words of encouragement and voting on their favorite projects. This, along with project activity, will be used to select the most popular projects or hot new projects to present to visitors. A new selection will be chosen daily, depending on which projects are trending up or down.

### Non-registered users

Non-registered users, including fans of indie game studios, will have the ability to browse the site, and download demos offered by game developers. By allowing a public audience to see the projects and other content on our website, it will encourage more users to register, as well as increase the visibility of our registered users’ projects.

We expect a percentage of non-registered users to try the games with demos available, and donate to the projects from PayPal links or other such links on the game’s project page.

### Video Game Companies

Established game companies may register on the site to create a page themselves, so that they may connect with and hire new developers, as well as advertise their own released games.

We expect this element of our site to be particularly popular. Dallas has many successful game studios in the area constantly looking for new talent, and our site will provide them dynamic information on such talent from UTD. Also, UTD alumni have formed new game studios here in the past, and our site can allow them to get a head start with finding new hires.

Of course, the process to create an official company page on the site would need to go through a process on the site to distinguish it from normal user pages, and to ensure that it is truly the real company being represented.

## KEY USER QUESTIONS

### The typical user, the game developer, will want to know:

**Q: Can registered users upload game demos?**

A: Demos can be uploaded for free download, or a link to an external page for a paid download.

**Q: How can user projects gain visibility with fans and industry?**

A: Registered users can browse other projects and connect with them, as well as sign up for ads.

Companies will also connect with developers to invest and hire them. Donation links will be embeddable in the site.

**Q: May projects advertise positions that need filling?**

A: All project pages have a section advertising open positions. Users can connect with other projects and add connections to company pages which will increase visibility, ultimately aiding in obtaining project members.

**Q: Will the website protect the rights and copyrights of the developer?**

A: Our site will make an effort to protect and respect the rights of all users, and to protect their intellectual property from the theft of others.

### Visitors and fans of the site will want to know:

**Q: Is registration required?**

A: Registration is only required to make a profile page, and to connect with profiles. All site content is open for the public to view, but visitors will wish to register so that they might interact with the site and connect with projects and other users.

**Q: Can anyone download demos, and if so, is it free?**

A: Demos hosted on the site are free, if the developer of the demo so allows. Non-free demos must be hosted by the developer at some external site. Similarly, anyone may donate to projects through embeddable donation links, but donations will be left to existing services external to our website, such as PayPal.

### Companies will be interested in:

**Q: The ability to find and contact quality game developers.**

A: The site will sort and track project pages to evaluate and find the best developers on the site, and highlight these projects daily on the browsing page, as well as on a user’s home page.

## Main webpages

There are four main webpages designed for the site. These are:

### Welcome page

This page serves as a login page for logged out users, and a user homepage for logged in, registered users. Here users will also be able to access navigation to all other major pages, such as registration and the browse page.

Users will also see the trending projects, and logged in users will see projects selected to their specifications, such as favorite projects they have connected with to track updates.

### Registration

Here the user will fill in all requested information to register for the site, including user information (which they may fill in and edit later on their profile page). Information includes name, email, current work, education, basic background and interests, as well as projects they are working on.

### Profile page

This is the primary functional page of our site. A project profile pages displays a list and user pictures of project members, images and descriptions of the project, its current progress, and any other relevant news.

Project demos, videos, and donation links are also displayed. For registered users, additional information such as the number of users who have voted for, or “favorited”, the project and a place to comment upon the project are available.

An area might also be dedicated to project sponsors, such as a particular school of UTD or even companies that choose to sponsor or fund a project.

### Browse page

The Browse page is the premier navigational tool to all of our users, both registered and non-registered. Here, all the many projects are represented by tiles of pictures and names. This list of projects may be sorted alphabetically, or by a series of different categories, and by popularity.

A ‘highlights’ category would portray current popular projects chosen by the users or by the website, as well as a category for official profile pages of video game companies and project sponsors.

### Other pages

A legal page will display important information regarding the legal protections and guarantees offered to our users, as well as outlining the protections we cannot guarantee. Frequent questions, sampled from our initial users, will be displayed and answered on our FAQ page. Also, an area of the site will be reserved for basic contact and support information, and all pages will have a space for advertisements by project sponsors and website partners.

## Development Strategies and Technologies

### Development plan and strategy

Our main tool for website creation is Microsoft Visual Studio 2010 and .NET 4.0. We are following a loose agile development strategy, where we have quick 30 minutes meetings twice a week to review weekly goals, and to assign web page improvements to each team member. Thus each week is roughly a sprint in our agile process.

To aid in this development pattern is the use of GitHub to manage project files and each version. GitHub allows team members to experiment and rapidly update changes to the website without fear of data loss or corruption.

#### Coding Practices

Where appropriate we intend to use javadoc style documentation throughout our code. For variable name conventions we intend to keep it simple and use camel case variable naming. Variable names and the overall code will have no-nonsense names that are self-documenting. Upon this we will still document as to have the purpose of the code clear and manageable for all future development.

### Technologies and Tools used

The following is the technologies and tools we are using in our goal to have a functioning website that works in all modern browsers (Internet Explorer, Mozilla Firefox, Google Chrome, Opera, Safari, etc.). Should time allow, effort will be made to design the website to be comfortable on other devices such as a mobile device. Our priority is to have it work on your average desktop monitor.

* Technologies Used
  + HTML: The markup language that is made use of to display the webpage content.
  + CSS: Cascading Style Sheets helps in stylizing the HTML content.
  + JavaScript: Facilitates client-side scripting that can achieve data validation, UI effects etc.
  + jQuery: jQuery is the cross-browser JavaScript library used in designing the website that simplifies the client-side scripting of HTML.
  + ASP.NET - Active Server Pages: The server-side script-engine for dynamically-generated web pages. All the webpages for the website would be for dynamically-generated ASP pages.
  + C# : The code-behind for the webpages (ASP.NET framework)
* Database
  + Microsoft SQL Server: MSSQL server is the relational database used to store and serve the data content for the indie game development website.
* Creating sprites/mock-ups
  + GIMP -GNU Image Manipulation Program: Open Source tool to create/edit/modify images used for the development of the website. Primarily used for image retouching.
  + Adobe Photoshop: Advanced graphics editing program used for manipulation of logos/banners/images used in the webpage design.
* Versioning Repository
  + GitHub: GitHub is the web-based hosting service that hosts the software development project . It makes use of the Git revision control system. Team members can work on code in their respective modules and commit changes to the master branch. All changes would be tracked by the repository.
* Coding tools
  + Microsoft Visual Studio 2010: Microsoft Visual Studio is the integrated development environment (IDE) from Microsoft that is used to develop the web site. Visual Studio also includes a web-site editor and designer that allow web pages to be authored by dragging and dropping widgets. It is used for developing ASP.NET applications and supports HTML, CSS and JavaScript. It uses a code-behind model to link with ASP.NET code.
  + Notepad++: Notepad++ is an open-source text editor/source code editor for Windows. One advantage of Notepad++ over the built-in Windows text editor, Notepad, is tabbed editing, which allows working with multiple open files.

## Use cases



### Use Case Diagram

### Use Case Stories

#### Login Page

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| Use case: Member login |
| Id: LoginPage1 |
| Summary:  A user that is already registered, a member, clicks the login link. The welcome page now changes to show recommend or similar projects, and projects the user is tracking, as well as updates to their projects. |
| Actor: Registered user |
| Preconditions: User is a registered member, is not currently logged in |
| Main Flow:   1. The user arrives on the site’s main welcome page through their browser. 2. If not logged in, interacts with welcome page menu to select login 3. Upon clicking login, a control pops up with a username and password field, as well as an option to remember the user’s password and to keep them logged in. 4. After entering credentials, the page changes to show user custom content such as project updates, watched projects, and with the message in the top right corner that [username] is logged in, with a link to log out.   Additional:  If the user login fails, a dialog pops up to warn them of the error. An option to register if not a member is available, and an option to recover password if needed. |

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| Use case: Project Update log |
| Id: LoginPage2 |
| Summary:  A member views their project log. The project log shows messages concerning the member’s project(s), comments on the projects by other users, messages from interested parties, and changes made by other project members. |
| Actor: Registered user |
| Preconditions: User is a registered member, and logged in to the site. |
| Main Flow:   1. The user, logged in to the site, sees their project log below recommend videos and key alerts. 2. Any of the individual log posts can be clicked to expand, giving details on the origin of the post, when it arrived, and additional data. 3. If desired, the user can click log data links to go to the page of the user that sent the message, to respond to it.   Additional:  Whenever the user visits a project page, a space will be dedicated to comment upon the page. This creates a log post on the project owners’ pages.  Posts by companies or other interested parties will stand apart from typical user comments.  Additional:  Changes to the user’s projects made by other project members will also appear, to alert them to the changes. |

#### browse page

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| Use case: Browse Page |
| Id: Browse1 |
| Summary:  Users who are both registered and not registered are able to see a page where they can browse the game projects submitted by independent game developers. Logged in users can upvote the game projects that they like and ‘favorite’ them for later use. The game projects are tagged with specific keywords which are displayed underneath each project. |
| Actor: Member or Non-Registered User |
| Preconditions: User is either a registered member or not. |
| Main Flow:   1. The user arrives at the browse page from any number of links throughout the site. The page serves as the main area from which members and non-registered users can access the different projects that have been submitted. 2. The logged-in members can favorite the game projects they like and also upvote them. 3. The different game projects are tagged with relevant keywords and members can edit/add new tags. |

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| Use case: Context-Sensitive ads and Suggestions in Browse page |
| Id: Browse2 |
| Summary:  Users who are both registered and not registered are able to see context-sensitive ads and suggestions(similar projects) in the browse page |
| Actor: Member or Non-Registered User |
| Preconditions: User is either a registered member or not. |
| Main Flow:   1. Context-sensitive ads are displayed on the browse page. It is one of the main sources of revenue for the website. The ads are displayed based on the following :  * User’s browsing history * User’s cache/cookies  1. Similar project suggestions are displayed at the bottom of the browse page for both members as well as non-registered users.   For registered users:  The suggestions are based on user history, user’s favorites and users’ friends’ favorites.  For non-registered users:  The suggestions are determined by an algorithm based on patterns like past browsing history, cookies and location-based data. |

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| Use case: Navigation in Browse page |
| Id: Browse3 |
| Summary:  Users who are both registered and not registered are able to navigate to different content pages within the browse page using the navigation pane |
| Actor: Member or Non-Registered User |
| Preconditions: User is either a registered member or not. |
| Main Flow:   1. The navigation pane displays the number of pages containing different projects and a way to navigate them efficiently. 2. The search bar helps users in searching for particular keywords/projects. 3. The users can also sort the projects using the alphabetical sort area and choose the projects starting with a particular alphabet. |

#### Register page

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| Use case: User registration |
| Id: Register1 |
| Summary:  After an unregistered user follows the register link, they are prompted to fill out the many fields and forms. |
| Actor: Non-registered user |
| Preconditions: User is nonregistered, and any registered users on the machine are logged out. |
| Main flow:   1. User clicks ‘Register’ link or button. 2. User is redirected to a list of fields to fill out. 3. The primary fields to fill in are username , email, and password. 4. Many other fields are available, such as user information, education, address, etc. but not all are required. They may be edited later at the user’s profile page. 5. The system checks that all fields are filled in. If a field is not filled in, system warns user and shows them which fields they need to fill in. 6. If all the fields are filled in, the system checks to make sure that the username selected by the user is not taken, and that their e-mail address is not being used either. If either of these fail, the system warns the user. 7. If all of these checks go through, the system checks to see if the password entered in both text fields for the password match. If not, the system warns the user that the passwords do not match. 8. System registers user with all the information entered in the fields and logs user in. 9. Welcome page and other pages update to the appropriate view for a registered, logged in user. |

#### Profile Page

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| **Use Case: member updating profile page** |
| **Id**: UC2 |
| Brief Description:  After visitor registered a membership, he/she can update personal information, project description, and upload game demo video. |
| Actors:  Registered user |
| Preconditions:  1. The visitor is a registered member and logged in |
| Main Flow:   1. The use case begins with the visitor logged in the web site by user id and password. 2. The visitor uploads a picture as head portrait. On the top of the profile page, the left side is a portrait position. visitor can click "upload" button, open a dialogue control, choose a photo as portrait, click" OK" button. 3. The visitor updates account information. On the top of the profile page, the middle side shows the member's name. Below the name, there are account information field. The visitor click "Edit" button, then the visitor can edit personal information, such as user id, password. There are three password textbox including one for tying old password, two for typing new password. 4. The visitor updates personal information. Below account field, there are personal information field including many textbox. The visitor click "Edit" button, then the visitor can edit personal information, such as name, male, address, date of birth, and so on. 5. In the same way, the visitor edits the education information( including student id, school name, major, start date, end date), work information(including company, position, description, start date, end date) and project description. 6. the visitor upload a game demo video. At the bottom of page, the visitor can see a subtitle "Demo", click "upload" button, choose a video file, click" OK" button. 7. Finally, the visitor click the bottom button "save" to finish all actions. |
| Post conditions: The system has updated the database associated with the membership education information, personal information, work information and project information. |
| Alternative Flows: At any time, the visitor can click on the “cancel button”(at the bottom of the page) to quit and the data would not be saved. |

**Table of Analysis for Class Selection**

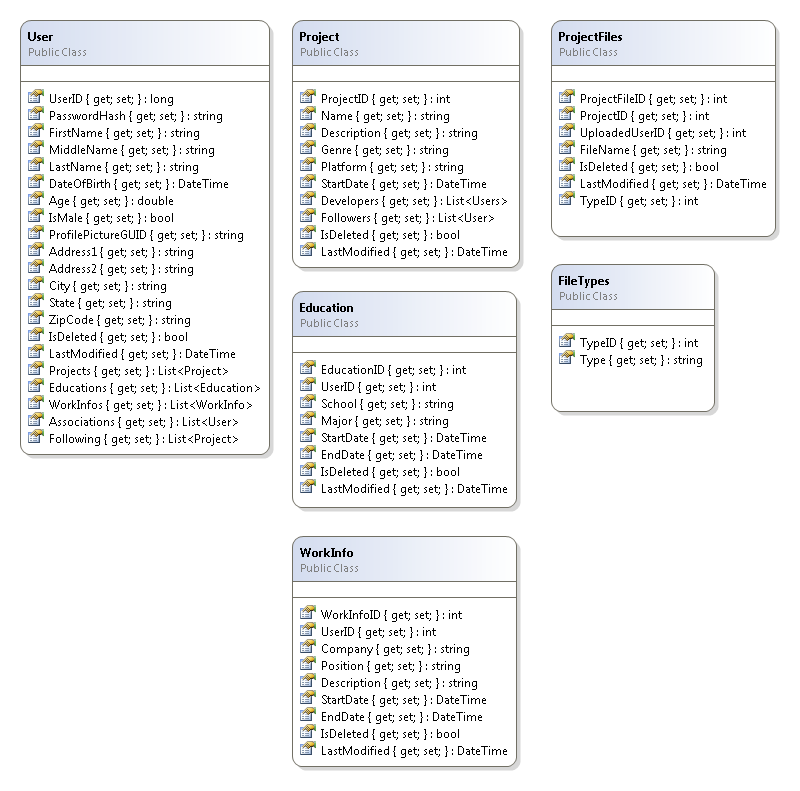
|  |  |  |
| --- | --- | --- |
| **Number** | **Class Name** | **Description of the class** |
| **1** | **User** | A entity created after a visitor has registered as a membership. It provides all personal information including name, password, date of birth, address, etc. |
| **2** | **Education** | A entity that represents the education information of a user, including student id, school, major, enrollment time, graduate time, |
| **3** | **Project** | A entity that represents the project information developed by a user. It provides project name, platform, description, start date, developers, followers. |
| **5** | **WorkInfo** | A entity that represents the work information of a user, including work id, company, position, description, start date, end date. |
| **6** | **ProjectFiles** | A entity that represents the uploaded project file, including file name, file type, uploaded user id, |
| **7** | **FileType** | A entity that represents the type of project file |

#### legal page

User sees a page containing the legal statements of the site, including but not limited to the user agreement, and the terms by which the site attempts to protect the rights of the developers who use the site as well as the parties which have created and maintain the site.

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| Use case: Legal Documentation |
| Id: Legal1 |
| Summary:  Users who are both registered and not registered are able to see a user agreement and legal terms of service/use for the site, privacy policy, copyright policy, which includes but is not limited to an explanation of rights of users as well as the site's intentions to protect those rights, as well as allowable and unacceptable terms of use of the site. |
| Actor: Member or Non-Registered User |
| Preconditions: User is either a registered member or not. |
| Main Flow:   1. The user arrives at the legal page from any number of links throughout the site. The page is mostly text as it serves as a legal terms of use agreement, acknowledged by any and all use of the site. |

## Class Diagram

Class Diagram

**User**: Along with basic demographic information, such as name, date of birth, address, places of employment [workinfo], education experience [education], etc., Users have one-to-many User-Project Associations, which link them to different projects on the site, thereby giving them edit/modify access. Users can also be Associated to other users, which allows users to keep up with friends/colleagues/associates in a similar way to social media's “friending”. Users also have a list of projects they are considered to be “following”, in which they could possibly be alerted to any changes or modifications or advances in a project they are not a part of, perhaps in a notifications area.

The 'login' mechanism will be handled by accepting a username (email) and password, hashing the password and comparing the hash to the hash stored in the database for the given username. Upon match, the user's information is loaded into session and they are 'logged in'. By storing the user information in session we can more quickly alter the site to allow for the more advanced features of a logged in user for particular pages depending on the user.

**Project**: Projects are managed/updated by the reverse of the User-Project association. In addition they store basic information on the project such as name, description, genre, platform, and when the project was began. In addition projects have Project-File associations which associate uploaded files, which could be images or screenshots, code samples, videos, installable demos, etc.