

Subject: 4SA220 - Web 2.0 & Social Networks
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THE DESIGN ESSAY DOCUMENT

GAME DEV WIKI

Introduction

The web resource will be dedicated to video game development, namely it will have basic information about tools that are needed for creating games, such as game engines, audio and graphic programs and other useful resources and further helpful guides.

The content of the website will be presented in the form of articles. The articles themselves will belong to specific categories.

Inspirations and Competitors Analysis

The competition analysis is very important for the development of the website. The analysis consists of two steps: **search of websites** and **definition of characteristics**. The results of the analysis will help to implement positive features and stay away from negative sides during the development of the website.

The first step in competition analysis is to search for websites that have a related or similar topic. I have found the following web pages:

- <https://www.develop.games>
- <https://www.gamedev.net>
- <https://enginesdatabase.com>

The second step in analysis is to define core positive and negative sides of each website.

Website	Positives	Negatives
develop.games	+ Dark theme + Navigation menu + Minimalistic design + Wide variety of topics + Links to other tutorials	- Brief information
gamedev.net	+ Navigation menu + Detailed information + Links to other tutorials + Different types of tutorials + Rating and commenting functions	- Complex web platform
enginesdatabase.com	+ Navigation menu + Minimalistic design + Detailed information + Links to other tutorials + Sorting and searching functions	- Only focused on game engines

Source: Author

Use Case Analysis

Use Case is a specific interaction or scenario between a user and software. It is wise to create a use case diagram for project, that will allow to easily and clearly understand use case connections between actors and themselves.

My website is going to have two main types of actors: **common users**, like gamers and game developers, and **administrators** of site.

There are also two types of special connections:

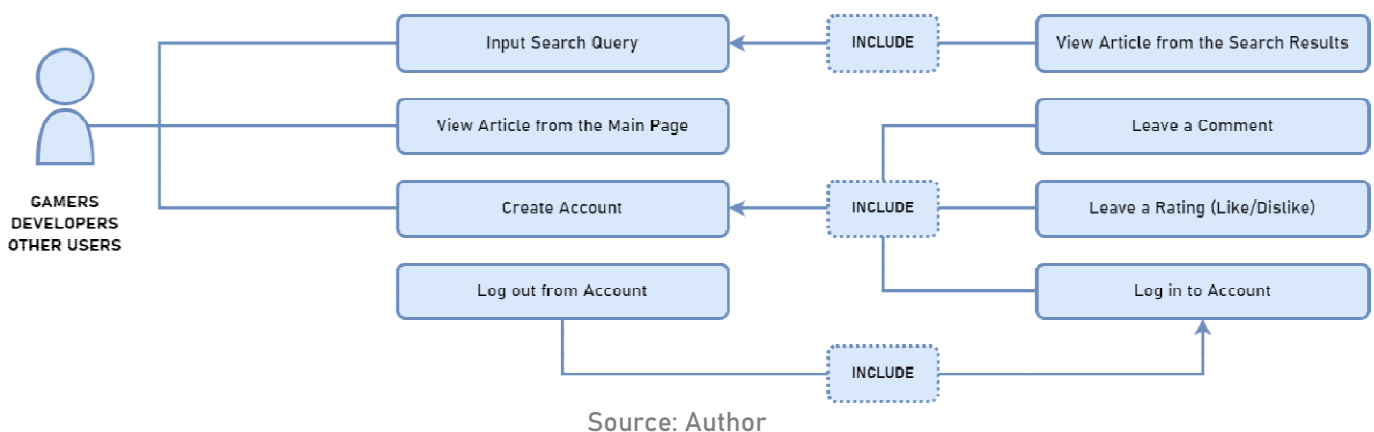
Include (B → A) – this connection shows that use case B is **dependent** on A, and usually use case B cannot happen before use case A. For example:

ENTER THE ROOM → **INCLUDE** → OPEN THE DOOR

Extend (B → A) – this connection shows that use case B is a **part** of A, and very often use case B is more specific than use case A. For example:

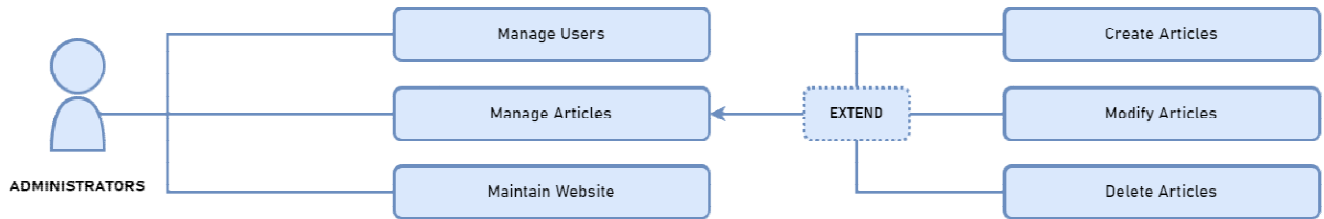
EAT AN APPLE → **EXTEND** → EAT A FRUIT

Use Case Diagram for Common Users



- **Create Account** – allow a new user to register account;
- **Log in to Account** – allow user to enter into their account;
- **Log out from Account** – allow user to exit from their account;
- **Input Search Query** – allow user to look for articles on web;
- **View Article from the Search Results** – allow user to view found articles ;
- **View Article from the Main Page** – allow user to access some articles directly from the main page;
- **Leave a Comment** – allow a user to write and submit a comment for an article;
- **Leave a Rating (Like/Dislike)** – allow a user to leave a feedback on an article;

Use Case Diagram for Administrators



Source: Author

- **Manage Users** - allow admins to oversee and controll user accounts;
- **Manage Articles** - allow admins to supervise and organize the website content;
- **Create Articles** - allow admins to create new articles;
- **Modify Articles** - allow admins to edit existing articles;
- **Delete Articles** - allow admins to remove articles;
- **Maintain Website** - allow admins to keep website in a proper functioning state;

Development Tools Analysis

It is also crucial to define software tools that will be used during development and management of the website. The in advance defined workflow tools significantly increase efficiency and productivity of work and maintain consistency of the project.

The following set of tools will be the foundation of the project:

- **WordPress** - a free open-source **content management system** (CMS) that allows to creating and managing websites.
- **Visual Studio Code** (VS Code) - a **integrated development environment** (IDE) developed by Microsoft. It is used to develop computer programs including websites.
- **XAMPP** - a free and open-source cross-platform **web server solution stack package**. XAMPP stands for "Cross-platform," "Apache," "MySQL," "PHP," and "Perl."
- **Paletton** - an online **color scheme designer** tool that is used for creating color palettes for web design.
- **GitHub** - a web-based **version control platform** used for software projects.

Website Templates Analysis

The type of my website is **educational**, therefore it shouldn't have graficaly sophisticated theme, but rather have a clean and intuitive design, that will allow users to find the needed information **quickly** and **easily**.

Those types of educational web resources are usually called '**wikis**' (short form of Wikipedia). Thus, I decided to browse the WordPress themes by using the keyword '**wiki**' in the search query. Fortunately, I have found and collected information about several **free** WordPress '**wiki**' themes. Then I have defined several criterias for selecting a more suitable theme:

- ❖ Rating of the theme should be 4.5 or above;
- ❖ Number of active installs should be above 500 (wiki themes aren't very popular);
- ❖ Date last update should not be before year 2023;

If condition is satisfied theme gets plus (+) mark, else theme recieves minus (-) mark. Therefore, the theme that scores the most pluses will be the most suitable for my website.

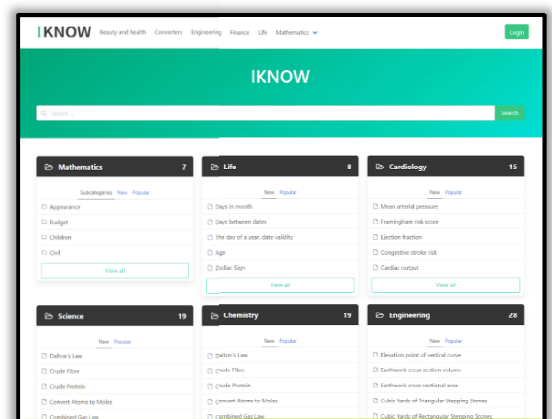
Theme Characteristic Table

Theme #1		
Theme Name	IKnowledgeBase	
Theme Link	https://wordpress.org/themes/iknowledgebase/	
Theme Author	Wow-Company	
Rating	4	-
Active Installations	1 000+	+
Last updated	26.09.2023	+
Theme #2		
Theme Name	MyWiki	
Theme Link	https://wordpress.org/themes/mywiki/	
Theme Author	FasterThemes	
Rating	5	+
Active Installations	1 000+	+
Last updated	11.07.2022	-
Theme #3		
Theme Name	LikeAWiki	
Theme Link	https://wordpress.org/themes/likeawiki/	
Theme Author	tradesouthwest	
Rating	5	+
Active Installations	300+	-
Last updated	13.02.2023	+
Theme #4		
Theme Name	Iknow	
Theme Link	https://wordpress.org/themes/iknow/	
Theme Author	Wow-Company	
Rating	5	+
Active Installations	1 000+	+
Last updated	17.08.2023	+
Theme #5		
Theme Name	WikiWP	
Theme Link	https://wordpress.org/themes/wikiwp/	
Theme Author	LifelsSimple	
Rating	4.5	+
Active Installations	500+	+
Last updated	27.01.2016	-

Source: Author

After comparing collected data, I have concluded that **theme number 4** is more suitable for website.

The theme itself is minimalistic and user-friendly, it supports several customization options, such as custom icons for categories and tags. It also has custom plugins and article search functionality. Moreover, it has a detailed documentation, which allows more options for modification.



Source: <https://wordpress.org/themes/iknow/>

Plugin Analysis

WordPress allows the use of **plugins** on websites.

Plugin is software component that adds specific features and functionality. It extends core features of WordPress, and allows to customize and modify websites according to the specific needs.

Because plugins are usually created by third-party developers, it is a best practice to collect and check information about plugins, which are going to be installed.

Elementor Website Builder

Author: Elementor.com

Rating: 4.5

Complexity: Hard

Brief description:

This plugin allows users to build professional, pixel-perfect websites with an intuitive, no-code drag and drop interface.

All-in-One WP Migration

Author: ServMask

Rating: 4.5

Complexity: Medium

Brief description:

This plugin comes with functions that allow migrating, exporting and importing WordPress websites with ease.

Akismet Anti-spam: Spam Protection

Author: Automattic - Anti-spam Team

Rating: 4.5

Complexity: Medium

Brief description:

This plugin enables anti-spam protection to block spam comments, spam posts and forms.

Iknow Extra

Author: Wow-Company

Rating: -

Complexity: Medium

Brief description:

This plugin adds some extra features to **Iknow** theme, such as post voting, comment voting, category icons.

Counter Box

Author: Wow-Company

Rating: 4.5

Complexity: Easy

Brief description:

This is a plugin for creating counters, timers and countdowns. Plugin comes with **iknow** theme.

Popup Box

Author: Wow-Company

Rating: 5

Complexity: Easy

Brief description:

This is a plugin for creating and displaying notifications and popus. Plugin comes with **iknow** theme.

Side Menu Lite

Author: Wow-Company

Rating: 4

Complexity: Easy

Brief description:

This is a plugin that adds extra functionality for creating side bars and menus. Pluggin comes with **iknow** theme.

Custom plugin with Steam API

I am also going to try implementing own plugin in PHP programming language. The plugin will collect information about games, such as reviews, system requirements, game engines and etc., by using the Steam API.

Application Programming Interface (API) – software with functions that allow communication between two applications.