Project name: GamerSight

Project Description:

  The project is about providing tools to choose a video game a user would desire. Two main features of it are searching games by categories and providing helpful materials about the games. The categories to choose from are genre, year of release, critic review scores etc. There will be an option of combining and excluding them. When the player decides to view a certain game from the list, he will be given diverse information about the game. It will include official game trailers, critic comments, gameplays and recommended hardware. In addition, the GamerSight will show the price discounts if those are currently active.

  As a person who likes to play video games myself, I always like to research before choosing to buy and install a game. In order to pick one I would enjoy and can afford, it is very helpful to look through videos about it on YouTube and read reviews at various gaming websites such as Steam, IGN, GameSpot. With the GamerSight I will be able to search for my game of choice easier. Plus, all the information about it, which is usually scattered throughout the internet, will be in one place.

Project Planning:

  First, I will implement searching games by categories. This will be executed by taking the list of games from sites like Steam, GOG, and Wikipedia using BeautifulSoup. Their genres, year of release and other profile information will be taken from those sites too. Each game's information will be handled using classes.

  Then there is a problem of getting critic review scores, ratings, and awards. This will also be solved by using BeautifulSoup. The sites that will be used this time are IGN, Metacritic, PCGamer. The collected information will serve as a means of searching games by categories.

  Secondly, I will design a game view page layout and will fill it with game's basic information, critic comments, awards, ratings, available discounts/special offers, official game trailers and optionally selected gameplays. YouTube API will be used to fetch trailers and gameplays. Steam's and GOG's APIs will be utilized to get game news, from which discounts and offers will be extracted.
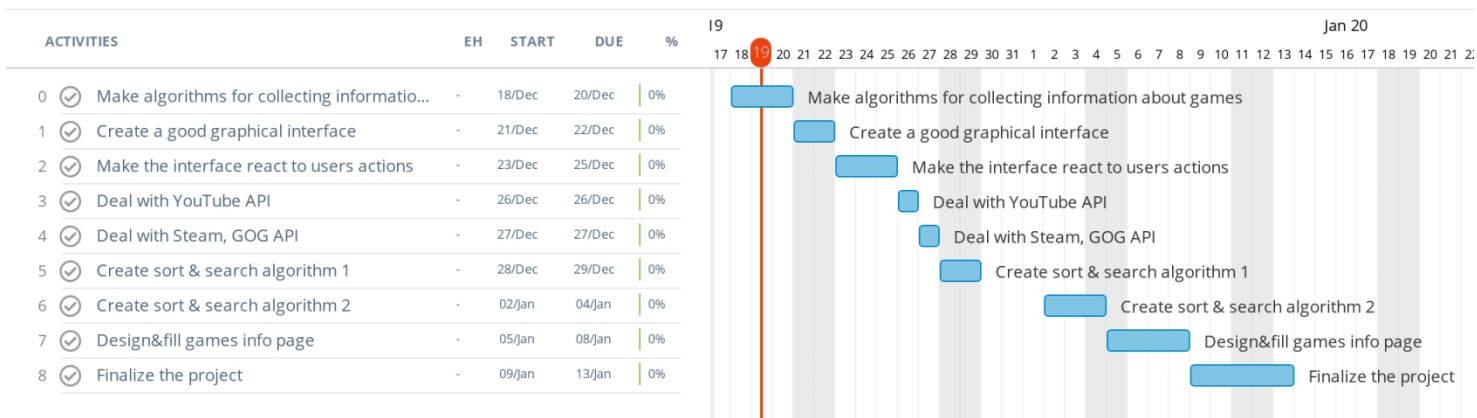
  The user interaction will be achieved through Python's graphical interface. Search by categories, looking for a game will be handled in that way too. There will be fields indicating categories, which would be a specific color depending on whether they are excluded/ included/ not selected. Searching for a specific game will be possible by entering the name of the game in a special blank space.

  These errors will most certainly need handling: Connection Lost, Incorrect User Input, and Unavailability of data on a web-page.

Timeline:

GamerSight
Read-only view, generated on 19 Dec 2019

	ACTIVITIES	EH	START	DUE	%
0	Make algorithms for collecting informatio...	-	18/Dec	20/Dec	0%
1	Create a good graphical interface	-	21/Dec	22/Dec	0%
2	Make the interface react to users actions	-	23/Dec	25/Dec	0%
3	Deal with YouTube API	-	26/Dec	26/Dec	0%
4	Deal with Steam, GOG API	-	27/Dec	27/Dec	0%
5	Create sort & search algorithm 1	-	28/Dec	29/Dec	0%
6	Create sort & search algorithm 2	-	02/Jan	04/Jan	0%
7	Design&fill games info page	-	05/Jan	08/Jan	0%
8	Finalize the project	-	09/Jan	13/Jan	0%

Update 1:

- ## What you have done:

  I have created a search for a game by keywords. User inputs some words and the program searches the game database for best matching results and outputs first 10. After printing out the names of those games, the program asks if the user wants more results. User has to print "yes" for 10 more games to show up or "no" if he is satisfied with the games he/she sees (it doesn't matter if some or all letters of "yes" and "no" are written in caps). If the program receives something besides the desired input, it prompts the user to input again.

  After the list of games has been shown and user inputted "no", the program asks for a number of the game the user wants to know more information about. Users inputs a number (incorrect input is handled) and such information about a game is shown: name, genres, release date, platforms, on which the game is available, developers, themes, game age rating, overview, minimum and recommended hardware requirements, as well as, the link to the web-site from which the information was taken.

- ## Any changes on the final project plan, and why:

  I didn't use Wikipedia. Scraping Wikipedia for the list of games was a bad idea because the names of games were spread out on different pages with various formatting. The various formatting required scraping every page with different approach. It was not worth to make it work, because it would take up too much time.
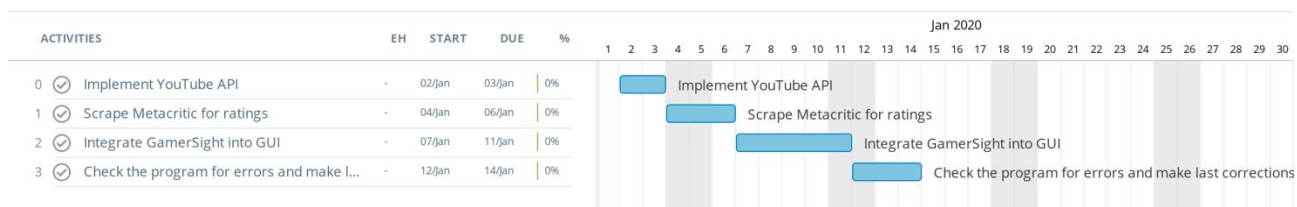
  Instead of Wikipedia I tried using API of the web-sites that provide databases of games (Steam, IGN, RAWG, GOG, IGDB, Giant Bomb). Steam does not have API that allows extracting information about games; IGN, RAWG, GOG and IGDB have complicated procedures for using their API. But Giant Bomb has an easy to use API, which allows extracting a lot of information. That is why I ended up choosing Giant Bomb as one of web-sites I use API from.

  I also decided not to make the search by categories, because Giant Bomb's API doesn't provide sort function and it also doesn't have an option to extract the whole database of games, for me to sort through them later.

- ## Timeline for the rest:

Update 2:

Since the last Update, I integrated YouTube API into GamerSight, made use of BeautifulSoup by scraping IGN, fixed some of the bugs, and finalized handling of the incorrect user input. Unfortunately, I also cancelled some of my previous goals: making GUI and scraping Metacritic for ratings.

YouTube: GamerSight searches YouTube for the name of a game and shows names and links to the top 5 results.

IGN: if a game has appeared in IGN's top 100 games of all time, GamerSight notifies about that.

Example of interaction with GamerSight:

```
Input a keyword to search with it for a game: witch
1 : Witch!
2 : Son of a Witch
3 : Witch It
4 : Witch & Hero II
5 : The Legend of Dark Witch 2
6 : Little Witch Academia: Chamber of Time
7 : The Legend of Dark Witch
8 : The Witch and the Hundred Knight
9 : Blair Witch
10 : Witch Sword

Do you want more results? Type 'yes', if yes; type 'no', if no: wer45

Are you sure that you entered a 'yes' or 'no'?
Do you want more results? Type 'yes', if yes; type 'no', if no: yes

11 : Witch Thief
12 : Witch Hunt
13 : Maria The Witch
14 : Slave of a Witch
15 : Witch Isis
16 : Cooking Witch
17 : The Lord of the Rings: The Battle for Middle-earth II - The Rise of the Witch-King
18 : Witch & Hero
19 : PearsAndGrayWitch
20 : Witch Island II

Do you want more results? Type 'yes', if yes; type 'no', if no: no

Choose the number of a game you wish to know more about: 345
Are you sure that you entered a number from the ones you have been shown?

Choose the number of a game you wish to know more about: 17
```

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              The Lord of the Rings: The Battle for Middle-earth II - The Rise of the Witch-King

Genres: Strategy, Role-Playing, Real-Time Strategy

Release date(dd/mm/yyyy): 28/11/2006

Platforms: PC

Developers: BreakAway Games Ltd., EA Los Angeles

Themes: Fantasy

Original_game_rating: ESRB: T

Overview:
The story follows the evil Witch King, also known as Lord of Nazgûl, and his road for domination. Unlike LOTR: Battle for middl
e earth 2, the campaign only expands through the evil campaign and The Witch King's rise over middle-earth and the fall of Arno
r, instead of a good and a evil campaign. You will control Angmar, a new faction from the hills up north, and along the way you
will meet different challenges, new units, buildings, locations and new heroes you never seen before in the films. That's becau
se the story covers everything that happend after the defeat of lord Sauron, but before the films, where Gandalf visit the Hobb
it Frodo in the Shire.

List of videos you might want to watch:
The Battle for Middle-Earth II: The Rise of the Witch-King Full Walkthrough HD [Hard] - https://www.youtube.com/watch?v=myA0zVy
bpQQ
The Lord Of The Rings: The Battle For Middle-earth 2 The Rise of the Witch-king Angmar Part 1 - https://www.youtube.com/watch?v
=Bbh-g61g_tk
Lord of the Rings Real Time Strategy - Battle for Middle Earth 2 Rise of the Witch King - https://www.youtube.com/watch?v=2SxSB
VqftY4
The Lord Of The Rings: The Battle For Middle-earth 2 The Rise of the Witch-king Skirmish Mordor - https://www.youtube.com/watc
h?v=bs8QtQs_K_I
The Lord of the Rings: The Battle for Middle-earth II: The Rise of the Witch-king - Epilogue - https://www.youtube.com/watch?v=
ZsI8Nc9kEAA

Reference site: https://www.giantbomb.com/the-lord-of-the-rings-the-battle-for-middle-earth-/3030-6447/
```

RUN:

No images, music files etc. are needed to run GamerSight.

The program uses 4 libraries: google-api-python-client, urllib3, beautifulsoup4, json.

To install libraries:

1) If using Anaconda. In Conda terminal write: **conda install** *name of the library*.
2) If using Python with pip. In the OS terminal, set the path to the folder where pip is located and write: **pip install** *name of the library*.

I have provided 2 files with extensions .py and .ipynb. You can run .py in Python 3 or any other environment that supports .py. You can run .ipynb in Jupyter Notebook.