1. **Introduction （400-500）**

Affected by the covid-19 , the public's demand for home entertainment has increased significantly. Playing games is also becoming indispensable for most young people under such social pressure. The happiest time for most modern young people is undoubtedly playing switch games on the sofa after work or study. This social situation has boosted Nintendo's game consoles and game software sales.

Nintendo is a Japanese company that mainly focuses on developing video game software and hardware. This company is one of the three majorities of the video game industry, and currently, it is the modern video game industry pioneer. Their most popular product is Switch, a console released in March 2017, which is a revolutionary console.

Switch's features are its design, which adopts the integrated design of the home console and handheld console. This design arguably redefines gaming. Players can play Switch games anywhere, such as at bus stops, planes, trains, or even in a doctor's waiting room due to its portability.

Five years past from 2017, the Switch has sold about 107.2 billion units in its lifetime. This impressive selling result made Nintendo Switch turn to be the seventh video game platform to sell more than 100 million units. Other platforms such as PS2, DS, Game Boy, PS4, PS1, and Wii are well-known. This indicates that Nintendo Switch is promoted to be one of the most popular products in the gaming world. A lot has changed for Nintendo since the Switch arrived in 2017; Nintendo Switch's derivatives have also kept up with trends and come into the public eye. One of the most important is Switch Games. Players can experience a variety of games with Switch, top switch games are simply stunning and profitable.

Metacritic is a website that collects reviews on games, which will integrate the scores of each reviews and make a final mark on the games. The final score is worthy as a reference by many players.

In this project, we will scrape data from Metacritic about the top hundred switch games and data from youtube. We aim to use those data to create a database, which will be convenient for further data pipeline study. >>>>我们要做什么 步骤 最后添加

Graph : Work flow create ([https://lucid.app/lucidchart/9b96a3e0-bd57-4acd-92b4-6d1e67ed96b7/edit?beaconFlowId=596B37B87BD2A753&page=0\_0&invitationId=inv\_ae3ec4e5-f8ca-41db-b267-12acbb4e7915#](https://lucid.app/lucidchart/9b96a3e0-bd57-4acd-92b4-6d1e67ed96b7/edit?beaconFlowId=596B37B87BD2A753&page=0_0&invitationId=inv_ae3ec4e5-f8ca-41db-b267-12acbb4e7915))

1. **Data Extraction**

* FIRST WEB
* SECOND WEB
* YOUTUBE

1. **Data processing and Cleaning**

In this project, we used two methods to grab data to ensure the information is realistic and up to date in the database. The first method is called web scraping, which we used as the first web crawler and second web crawler. API is the abbreviation of the Application Programming Interface as the second method we have used during this project to help in data extraction. An API is simply a programming code that will allow data transfer between software. API working processing is as shown in the following flow graph. This method is formal and under license, as most platforms provide API to the public. Both ways extract data with their unique benefits. We will show how we played with these two methods to catch data in more detail as follows.

图形用户界面, 图示

描述已自动生成

**-** FIRST WEB

* SECOND WEB
* YOUTUBE

1. **Data Storage**
2. **Relational Database**
3. **Exploratory Data Analysis**
4. **Database Value**
5. **Conclusion**
6. **Appendix**
7. **References**

<https://www.pocket-lint.com/games/reviews/nintendo/140007-nintendo-switch-review-console-specs-price-and-features>

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