**Task 10**

1. **How to use JSON files?**

JSON (JavaScript Object Notation) is a file mainly used to store and transfer data between a server and a web application. It is popularly used for representing structured data. This article will discuss how to handle JSON data using Python. Python provides a module called json which comes with Python’s standard built-in utility.

Note: In Python, JSON data is usually represented as a string.

Importing Module

To use any module in Python it is always needed to import that module. We can import json module by using the import statement.

Example: import json

1. **What online services can give us access to GPU like Colab and Kaggle?**

Several online services provide access to GPUs for running applications that require robust hardware acceleration. Some of these services include:

* NVIDIA GPU Cloud Computing Solutions
* Google Cloud GPUs, including Google Colaboratory
* Paperspace Core
* Amazon EC2 instances
* Vast.ai
* Oracle Cloud
* Microsoft Azure
* IBM Cloud

1. **The extension makes no tracking for your browser?**

* Privacy Badger
* uBlock Origin
* DuckDuckGo Privacy Essentials
* Ghostery
* HTTPS Everywhere

1. **What is data mining?**

Data mining is the process of discovering patterns, correlations, and other insights in large datasets using computational methods. It involves applying statistical and machine learning algorithms to identify hidden patterns and relationships in the data.

The goal of data mining is to extract useful and actionable information from large and complex datasets. This information can be used for a variety of purposes, such as making predictions, identifying trends, and optimizing business processes.

The data mining process typically involves several stages, including data cleaning and preprocessing, data exploration and visualization, feature selection and extraction, and model building and evaluation. Each stage involves a variety of techniques and algorithms, depending on the specific problem and dataset.

Data mining is used in many fields, including finance, marketing, healthcare, and manufacturing. Some common applications of data mining include fraud detection, customer segmentation, recommendation systems, and predictive maintenance.

However, it's important to note that data mining raises ethical concerns, particularly regarding privacy and data security. It's important to use data mining techniques responsibly and concerning individual privacy and data protection laws.

1. **What are scraping tools?**

Web scraping tools are software applications that automate the process of extracting data from websites. They work by sending HTTP requests to web pages, parsing the HTML code that is returned, and extracting the relevant data.

Web scraping tools can be classified into two main categories: general-purpose and specialized.

General-purpose web scraping tools are designed to work with a wide range of websites and are often used for research, data mining, and competitive analysis. Some popular general-purpose web scraping tools include:

BeautifulSoup: A Python library that makes it easy to scrape data from HTML and XML documents.

Scrapy: A Python web crawling framework that can be used to extract data from websites.

Puppeteer: A Node.js library that provides a high-level API for automating web browsers.

Selenium: A web testing framework that can also be used for web scraping.

Specialized web scraping tools are designed for specific types of websites or data sources. For example, there are web scraping tools that are specifically designed for social media platforms, e-commerce websites, or news websites. Some examples of specialized web scraping tools include:

Octoparse: A web scraping tool that is specifically designed for e-commerce websites.

Import.io: A web scraping tool that is designed to extract data from web pages that require authentication or JavaScript rendering.

Twitter API: A set of APIs that allow developers to access and extract data from Twitter.