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🡺 Which of our tabs/subframe has the highest CPU/Energy Impact and what is the value?   
Which is consuming the most memory and what is the value?

*[technically none. They both consumed 0.00 of my CPU]* has the highest CPU/Energy Impact with a value of *[sometimes the Word document would consume 3.1 of CPU and then again it would decline to 0]*

*[Tab: Course Documents]* consumes the most memory with a value of 123,500K

🡺 What is sent from the API to a system?

Request

🡺 What is sent from the system back through the API?

Response

🡺 Following the [top-level domain](https://en.wikipedia.org/wiki/Top-level_domain)/and/sub/directories, what character signals the beginning of a [query string](https://en.wikipedia.org/wiki/Query_string)?

?

🡺 What character separates multiple key=value parameters?

,

🡺 What are three other terms for a [key=value pair](https://en.wikipedia.org/wiki/Attribute%E2%80%93value_pair)?

attribute=value pair , name=value pair, field=value pair

🡺 What does JSON mean?

JSON, short for JavaScript notation format, is a data representation format; that means we can represent certain data types within it. JSON is a superset of JavaScript, so every code we write in JSON is valid JS. It is mostly used in APIs and Configs.

🡺 What was your API request to get the weather for Toronto in metric units?

http://api.openweathermap.org/data/2.5/weather?q=Toronto&appid=fe781e059e25c50f460f226e052aaa0d&units=metric

* What JSON data was returned from your API request?

{

"coord": {

"lon": -79.42,

"lat": 43.7

},

"weather": [

{

"id": 800,

"main": "Clear",

"description": "clear sky",

"icon": "01n"

}

],

"base": "stations",

"main": {

"temp": 20.96,

"feels\_like": 23.07,

"temp\_min": 20,

"temp\_max": 22.22,

"pressure": 1016,

"humidity": 82

},

"visibility": 14484,

"wind": {

"speed": 0.83,

"deg": 83

},

"clouds": {

"all": 1

},

"dt": 1592628598,

"sys": {

"type": 1,

"id": 941,

"country": "CA",

"sunrise": 1592645755,

"sunset": 1592701367

},

"timezone": -14400,

"id": 6167865,

"name": "Toronto",

"cod": 200

}

🡺 TZ.1 What is the URL of your time zone API request for Toronto?

http://worldtimeapi.org/api/timezone/America/Toronto

🡺 TZ.2 What JSON data was returned from your Toronto time zone API request? Using Firefox, copy the Raw Data from "Pretty Print" format, and paste here please.

{

"abbreviation": "EDT",

"client\_ip": "72.141.67.217",

"datetime": "2020-06-20T01:01:17.105344-04:00",

"day\_of\_week": 6,

"day\_of\_year": 172,

"dst": true,

"dst\_from": "2020-03-08T07:00:00+00:00",

"dst\_offset": 3600,

"dst\_until": "2020-11-01T06:00:00+00:00",

"raw\_offset": -18000,

"timezone": "America/Toronto",

"unixtime": 1592629277,

"utc\_datetime": "2020-06-20T05:01:17.105344+00:00",

"utc\_offset": "-04:00",

"week\_number": 25

}

🡺 TZ.3 What is the pseudocode logic to convert the UTC-Unix timestamp to a local timestamp? Use the [schema](http://worldtimeapi.org/pages/schema) to interpret the JSON data. The only thing not in that data is the local timestamp.

1. Receive the UTC-Unix timestamp of Toronto using this URL: <http://worldtimeapi.org/api/timezone/America/Toronto>

2. Calculate the sum of UTC\_datetime and UTC\_offset and save it as local timestamp(localTS) // UTC\_datetime is 05:01:17 and UTC\_offset is -04:00. The sum would be 01:01:17 which is the current time.

3. print out the localTS

🡺 TZ.4 In the TZ.2 JSON schema, find the values identified in the answer box below and paste. The only value not returned is Toronto’s local timestamp. Calculate and insert Toronto’s local timestamp value. Check it as noted above.

UTC Unix timestamp: 1592629277  
UTC date & time: "2020-06-20T05:01:17.105344+00:00"

Values to convert from Unix to Toronto timestamp: UTC\_datetime , UTC\_offset

**Toronto Unix timestamp:**

🡺 **Determine**: This is largely given by the assignment specs but how do you become comfortable with the scope of the assignment? How do you create a plan to complete it?

The first thing I do is to fully read the workshop file and completely understand what it WANTS. Therefore, I first try to learn all the basics of that week materials by watching the video tutorials that the professor has posted, so that I would at least understand the question asked.

🡺 **Define** the detailed requirements. What do you do to fully understand the problem? How do you ensure you have a firm grasp of all inputs, processing, and outputs?

After I get aware of the core concepts and understand the question, I read the notes of that week from IPC website and search for anything that I couldn't understand from those notes. This ends up watching YouTube or LinkedIn videos and reading various articles.

🡺 **Design**: Please, don't jump into coding yet. How will you design a solution? Do you know the technical skills the solution requires? What about creating pseudocode or a flowchart to document the algorithm? Is there value in writing all the coding comments first? (The answer is yes.) How will the process of design help the development process?

I start solving the problem by writing the pseudocode in my mother language; this way, I'm more dominant on the question and I can see what needs to be done more clearly. The pseudocoding, if it gets complicated, may result in drawing a flowchart of the process.

I have never used commenting-before-coding; I have always reviewed the steps of solving the problem to myself and then wrote the code for it. I think it is way neater to first write some comments on how things need to be done before drowning in coding.

🡺 **Develop**: How do you translate your solution's design into source code and commands, that is, how will the solution be implemented? What is your process of writing, building, testing, and debugging code or commands? *(Please do not send any source code...just a description of your development process.)*

Because most of the steps are explained in my pseudocode, there's little need to think about the solution to one particular problem in the process of coding. Basically, all I need to do is to respect the syntax rules and not mess the code up with some stupid errors in typing. There are some times (not to say most of the times) that my solution to the problem doesn't add up and the code does not work the way it should; that's when I start to think again and come up with a better loop, for example. There are some other times that I get unreasonable errors and that's when I start digging forums to find the answer. I'm still not that good in debugging and I can't find the answer to my error with it.

🡺 **Deliver**: How do you manage the delivery and deployment of your project? Yes, there are required steps on the matrix server. How do you resolve issues when things do not work as expected? What do you do and how do you make changes to achieve a successful test? Finally, how do you conceive of what to write for the reflection text?

I have passed the ULI course last semester, so I'm fairly aware of the matrix and coding in Linux; so, when some error occurs when uploading and executing the source code, let's say the file doesn't have the execute permission, I'm capable to solve it. Major issues appear when matrix is checking the code to be exactly the same as the sample; there, I find out how careless I'm in paying attention to spaces and other things like it.

For the reflection part, I can ramble on for more than 600 words and not get exhausted. I try to explain everything comprehensively and show my satisfaction or unhappiness of the materials in it. I mostly try to specify at least two sentences describing my weaknesses and ask the professor to help me overcome it in the next week.

**Describe three IoT devices *that the world really needs* and why. What is the value added by its network connectivity? Invent your own or identify an existing device.** (see the notes below)

🡺 1. Google Home Voice Controller / Amazon Echo Plus Voice Controller : These are two popular devices out of hundreds in the market. You can enjoy these devices tackle the basics tasks of the day for you, like phone calling someone or playing music or news; you can also adapt your house and modernize it so you can perform much complicated tasks, too. An example would be turning on/off the lights of the living room. I love these devices because there's no limit for the things you can do with them; you just have to perfectly integrate your Google Home or Amazon Echo devices with your home or office. I have had an Amazon Echo Dot and enjoyed its companionship a lot; I'm planning to sell it, however, because of the news related to its security.

🡺 2. Edyn Smart Garden Sensor : I've always been a lazy and lousy person in gardening. No plant ever survived under my supervision. This device can be the Oskar Schindler of plants. With this device you can keep track of your plant growth at its finest; it checks the condition of the soil and then you can balance everything with the data from it. To name some features, it can measure the temperature, pH, moisture levels, and nutrients.

Review of the device: <https://www.youtube.com/watch?v=yJRB7tuWTdc>

🡺 3. Nest Hello : Months ago, I was searching about a security camera that does face recognition and then gives the permission to enter; I came up with Nest Hello as the best option. There are Nest Cam IQ Indoor and Nest Cam IQ Outdoor that do the same as Nest Hello; IQ Indoor can tell you who's already inside your house and IQ Outdoor can tell who's outside the house. Nest Hello is installed on the doorbell's eye-level location and is the cheapest of the three. I wanted to build the same thing as Nest Hello with Raspberry Pi for my HWD class; It also was planned to have voice recognition, means that the user had to say the code sentence in order to enter. The project, however, got cancelled because of the coronavirus, but I still am thinking about it to build it in near future so that our mafia sessions would be held at the most secure way possible :))

**Research the version of a software application** you use, such as a game, photo editor, browser, or IDE. Usually, the version can be found under the Help menu, About…

🡺What is the name of the software and its current version?

Spotify Desktop v.1.1.34.694

🡺What do the components of the version number mean?

The first '1.' refers to software's major revision; that means new UI or lots of new features, which by saying the version is 1, we find out that the software looked the same ever since it started working. The second '1.' refers to minor revision (minor features and functionalities added). '34' is micro revision and refers to bug fix release. Last but not least, '694' is the build number.

🡺In what way would that software be [forward compatible](https://en.wikipedia.org/wiki/Forward_compatibility)?

If software needs to support forward compatibility, the hardware/software must also be backward compatible. Added to that, the software must be compatible with other related software applications if we want to develop it after the current version

🡺What can you observe to indicate that the software is [backward compatible](https://en.wikipedia.org/wiki/Backward_compatibility)?

If it can interact and connect with older versions of itself. Examples would be telephone system, or some of the software applications that still can be run on windows XP or Vista.

🡺Find the release notes for that software and include the URL, release date, a description of one of the latest changes.

Unfortunately, Spotify does not publish the release notes for its updates.

<https://medium.com/maxyou/release-notes-and-changelogs-88aedbe3fa8d>





