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🡺 Task Manager can tell you the name of PowerPoint’s .EXE file. What is it? How did you find it?

Powerpnt.exe

I found this by selected the dropdown menu when I saw PowerPoint, then I right clicked (shift + f10) on, “Microsoft PowerPoint (32 bit)”, then I selected on properties.

🡺 An API is like mail man where you give a message as well as the address to where you want to send it (request to send to a destination), the mail man sends the letter to the postal service telling them where to send the letter (API telling the system what to do) and mail man returns a reply to your message (returning response).

It’s also liked a black box as in the average user does not care about what happens during the process of the API telling the system the order that was requested. The average user just assumes that the response based on the request is accurate.

🡺 What is sent from the API to a system? A request by the user is sent to a system when the user gives parameters to the submits to the API (places an order or sends a message)

🡺 What is sent from the system back through the API? A response is sent through the API when the user receives information based on what they inputted into to API (receives an order or receives a reply message).

🡺 What was the Request displayed on the page?

GET [https://translation.googleapis.com/language/translate/v2?q=dog&target=fr&source=en&key={YOUR\_API\_KEY}](https://translation.googleapis.com/language/translate/v2?q=dog&target=fr&source=en&key=%7bYOUR_API_KEY%7d)

🡺 What was the Response to the translation request?

Showed the number 200 on top to indicate 200 OK meaning the API was able to respond successfully.

cache-control: private

content-encoding: gzip

content-length: 83

content-type: application/json; charset=UTF-8

date: Wed, 10 Oct 2018 23:18:24 GMT

server: ESF

vary: Origin, X-Origin, Referer

{

"data": {

"translations": [

{

"translatedText": "chien"

}

]

}

}

Toronto:

Latitude: 43.6529

Longitude: -79.3849

TimeStamp:

1539165600 UTC -> OCT 10th 2018 @ 10:00 am

🡺 What is your timezone API request for Toronto right now? i.e. **the URL with query string**

JSON:

<https://maps.googleapis.com/maps/api/timezone/json?location=43.6529,-79.3849&timestamp=1539165600&key=AIzaSyBZQBnlke9vzjcTo0PL1HmggIlhNBh4chU>

XML:

<https://maps.googleapis.com/maps/api/timezone/xml?location=43.6529,-79.3849&timestamp=1539165600&key=AIzaSyBZQBnlke9vzjcTo0PL1HmggIlhNBh4chU>

Only the output format value is different, json value displays the result in JavaScript Object Notation and the xml value displays the result within a TimeZoneResponse tag (node) which organizes the output in child tags (child node).

🡺 What was the JSON Response AND what does JSON mean?

The JSON response was:

{

"dstOffset" : 3600,

"rawOffset" : -18000,

"status" : "OK",

"timeZoneId" : "America/Toronto",

"timeZoneName" : "Eastern Daylight Time"

}

JSON stands JavaScript Object Notation, it converts objects in JavaScript into a text-based format to allow the data to be transferred through a server.

🡺 What was the XML Response AND what does XML mean?

The XML response was:

<TimeZoneResponse>

<status>OK</status>

<raw\_offset>-18000.0000000</raw\_offset>

<dst\_offset>3600.0000000</dst\_offset>

<time\_zone\_id>America/Toronto</time\_zone\_id>

<time\_zone\_name>Eastern Daylight Time</time\_zone\_name>

</TimeZoneResponse>

XML stands for eXtensible Markup Language, it allows the programmer to organize a large amount of data in a hierarchy of nodes, specifically meant to be parsed by another program.

🡺 How would you convert the UTC timestamp to Toronto's local time using the information provided by the API? (the above link and a calculator will help).

To convert the UTC timestamp to Toronto’s local time you must use this formula.

Toronto’s local time = timestamp + dstOffset + rawOffset

The sum of the timestamp parameter and the dstOffset and rawOffset found in the result.

**SDLC**

🡺 (25 points) Apply the SDLC to a project or assignment in IPC144 or ULI101. How will you use the steps of software development to complete your next assignment?

I will use SDLC in my next IPC workshop (workshop 5)

***What is the problem?***

***IPC Workshop 5 involves creating an employee struct that encapsulates three pieces of information, their id, their age, and their salary. The goal of this workshop is to make an array of type employee and allow the user to interact with the array, add employee information, as well as display all employee information stored in the array. This is the in-lab part so most of the thinking is already done in the instructions.***

***The at home part (the part that I must plan on my own) involving adding the ability to update a specific employee’s salary as well as the ability to remove employee***

**–> Determine**: Plan out my code in pseudocode which will appear as comments in my code organizing my layout and my logical thought process before I start programming. This will ultimately reduce the amount of debugging that needs to be done as all the logical thinking has been done before programming. If the thinking and the programming were done at the same time, it’s much harder to code since there is a lot to know or remember all at once.

**–> Define**: In this step I will define what the user can do to interact with my application. In this case it is giving the user ability to manage a list of employees by giving options that they can choose from to do so.

In the home workshop, I must document to more possible options that the user can do to interact with the array, that is update or remove, to document updating, I can write my thought process right where the code should go, I will put:

//do

//prompt user for id to determine employee to be changed

//if employee exists prompt for the new salary

//else prompt again if inputted incorrectly <- inside while condition

For documenting removing I will put:

// do

//prompt user for id to determine employee to be changed

//if employee exists remove it <- removing an employee in the program is setting all the variables encapsulated in the struct to be zero.

//remove one from employee counter

//else if prompted incorrectly prompt user again <- inside while condition

***What is the solution?***

**–> Design**: In this step I will decide what I should do to get the program working efficiently as possible. For example, deciding whether I should separate a specific part of my program and put it into its own code block or function.

The pseudocode above has a design that was thought out which the use of a do – while loop over the other loop constructs as I felt that it made the most sense given this context.

**–> Develop**: This step involves converted all the English pseudocode into source code that is specific to a programming language. For the workshop that will be C. This is also where all testing is done before submitting the code. This could involve using a walkthrough table and manually recording every change to a value of a variable, it could also be putting intermediate printf statements to show the value of a variable. The program must also be testing thoroughly as in checking every possible flow the computer could take in a program and make sure you get the correct results.

**–> Deliver**: For this assignment, the only user is the professor, however even though that’s the case he should not feel the need to look in my code when he is testing my program to see if the program’s output is correct as it should be very straightforward with as little bugs as possible in the final product to avoid user frustration. The user should not have to care about what happens in the background when they are using an application they just assume it works as expected.

🡺 (15 points) **Many devices exist in the Internet of Things or IoT. Describe three such devices—start Googling.**

Nest Smart Home Thermostat

This thermostat can connect to your phone where you are able to connect your phone to it wirelessly through a mobile app allowing the user to change the temperature in the house remotely. Once you have used it long enough it understands your schedule and it will automatically try to save energy when it knows nobody is home. It also can connect to a voice assistant such as Google, Siri, or Alexa, to allow a user to give a command to an assistant to for example, change the temperature just by asking.

Amazon Echo

This is a voice only controlled device that is connected to the internet and allows the user to search for anything on the internet, stream, and other neat features connecting with other devices such as a nest thermostat which then only requires your voice to change the temperature. It can connect to many other home devices which continues to expand the features of this powerful voice-controlled device.

Stride smartwatch

Wearable technology that can link to your phone through Bluetooth which is only meant to track how active you are when you are exercising. It uses information from your phone such as it’s current location, if you plan on going on a run it will be able to calculate the distance you ran as well as your heart rate as you were running, as well as the calories burned when doing so.

🡺 (15 points) **Software Version**

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

I will be talking about the game Minecraft allowing you to build whatever you please

* Software/Firmware description and version. What do the components of version number mean? Current version is 1.13.1

The first number one represents the game is no longer is beta and it is a full game

The second number represents a major feature release where they add many new and exiting features to the game making people want to come back and play again.

The last number represents a minor feature release which has a few new features, but it is mostly there to fix the bugs the came with the latest major release.

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

In this game, the developers rarely ever remove features of the game because since it’s a sandbox game, removing a feature could mean destroying people’s creations.

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

This game is backwards compatible to previous versions of the game only if you do not use any of the new features that are exclusive to the newer version of the game. As long as you only use old features only you are able to downgrade the version of Minecraft your are running and still play the game where you left off.

* Find the release notes for that software and include the
  + URL, <https://minecraft.gamepedia.com/1.13.1>

Scroll down for timeline of release information.

* + release date,

The latest version released August 22nd 2018. Which is 1.13.1

* + a description of one of the latest changes.

Purpur stairs and purpur slabs can be created from the purpur pillar block, the game developers tend to do this a lot, they give more features to make the game slightly more convenient and entertaining to the player by giving more options with what they already have.