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Click or tap here to enter text.

***(5) or (6) points each*** *for the following API, and Time Zone questions.*

**Using Mozilla Firefox is strongly recommended for this Activity because it can transform JSON responses into a human readable format.** (e.g. Raw Data > "Pretty Print")

1. (5) What is sent via the API from one system to another?  
 What is sent back from that other system upon receipt of the API?

Sent to: A request from one system to another system is sent via API

Sent back from: the user to other system from the API receipt

2. (5) Use api.agify.io to predict the age of a person using your given name and ISO country code.

API URL request:https://api.agify.io/?name=harshil&country\_id=IND

JSON response: {"age":74,"count":5324,"country\_id":"IND","name":"harshil"}

3. (5) What does IPstack.com report about your public IP address?

API URL request: http://api.ipstack.com/ 192.206.151.131?access\_key=91c70e649fe71b6aee610df2402c1c37

JSON response: {"success":false,"error":{"code":106,"type":"invalid\_ip\_address","info":"The IP Address supplied is invalid."}}

4. (6) What was the URL of your weather [API request](https://openweathermap.org/current#name) to openweathermap.org for information, about any city *other than Toronto,* in metric units?   
 What JSON data was returned from your weather API request?

API URL request: http://worldtimeapi.org/api/timezone/Indian/Maldives

JSON response:

{"abbreviation":"+05","client\_ip":"2607:fea8:5462:1900:54e4:5166:116b:e24d","datetime":"2022-11-11T09:24:59.519904+05:00","day\_of\_week":5,"day\_of\_year":315,"dst":false,"dst\_from":null,"dst\_offset":0,"dst\_until":null,"raw\_offset":18000,"timezone":"Indian/Maldives","unixtime":1668140699,"utc\_datetime":"2022-11-11T04:24:59.519904+00:00","utc\_offset":"+05:00","week\_number":45}

5. (6) What is the URL of your timezone API request to worldtimeapi.org for any city *except* Toronto?  
 What JSON data was returned from your time zone API request in human readable format?

API URL request: http://worldtimeapi.org/api/timezone/asia/kolkata

JSON response:

{

"abbreviation": "EST",

"client\_ip": "142.112.227.26",

"datetime": "2022-02-19T21:20:54.028770-05:00",

"day\_of\_week": 6,

"day\_of\_year": 50,

"dst": false,

"dst\_from": null,

"dst\_offset": 0,

"dst\_until": null,

"raw\_offset": -18000,

"timezone": "America/Toronto",

"unixtime": 1645323654,

"utc\_datetime": "2022-02-20T02:20:54.028770+00:00",

"utc\_offset": "-05:00",

"week\_number": 7

}

6. **(10)**Using the above JSON data from worldtimeapi.org, fill in the JSON key / value pairs related to the descriptions in the table below.   
The only key / value not found is the *location's timestamp.*Convert the Unix UTC timestamp to a location timestamp showing the calculations.   
The location timestamp is same as a UTC timestamp with different seconds +/- adjusted for the location's time zone.

|  |  |  |
| --- | --- | --- |
| *See Response Schema* | JSON key | JSON value |
| UTC date/time in ISO8601 format | utc\_datetime | 2022-11-13T02:59:07.599820+00:00 |
| Unix UTC timestamp | unixtime | 1668306976 |
| Unix UTC to location difference | utc\_offset | +05:00 |
| Location's daylight saving time difference | dst\_from | null |
| How do you calculate the location timestamp from the UTC timestamp using JSON keys? | (unix timestamp/86400) + DATE(yy,mm,dd) | *64187.10852* |
| Location date/time in ISO8601 format | datetime | 2022-11-13T07:36:16.065185+05:00 |

**7.**  (6) How did you confirm that your location timestamp when converted to data/time was the same as the Location date/time in ISO8601 format in the JSON schema? Show your test and the result.

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Coordinated Universal Time date & time of 2022-11-11 11:11:22‬‬‬

Name: Value pairs to convert the Unix timestamp into a local timestamp are:

"2022-11-11T07:04:20.2697562+00:00" and 11:22

Local timestamp of 2022-11-11T11:11:22.2697562-05:00

local date & time for [TORONTO] of 2022-11-11 11:11:22 ‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬‬

SDLC – System Development Life Cycle

**(48 points = 8 × 6 steps below, 75+ words each.** Note that the minimum word count gets more or less average marks depending on the quality of content. To go above average, see the marking rubric in the course Announcements.**)**

***What is the problem?***

**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?

When I open the workshop document I look all the outputs but at first I didn’t get any idea how to complete it. I try to create output like that same by thinking a lot. Also to get help there is also a lecture notes pdf and the instruction pdf from which I get much help to complete the workshop

**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?

Firstly I check some examples and try to understand them very precisely and after that I initially try to understand and solve the problem. Some of the times I also do the try and error and that’s how I also understand some question because by doing try and error I understand that what’s wrong with my solution. And finally I get the solution.

***What is the solution?***

**Design**: How will you design a solution? 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?

Talking about me personally I design the code by pseudocode or a flowchart because it makes the workshop easy to understand because when we make pseudocode or a flowchart we divide workshop into the small parts and that’s make easy to under and can complete the workshop very efficiently

**Develop - Programming**: How do you implement the design into source code? What is your process of writing comments and code? *(Please do not send any source code...just a description of your development process.)*

Firstly I try to think each logic on the paper and then do it in the code also many times I use try and error method specially in the loops because that’s how I get to know that my code is working properly or not and if I got an error than I change the logic and try it again until the code match the output

**Develop - Testing**: What is your process to test and debug code?

After completing the source code if I get an error then I go through each line of my code and solve it on the paper and try to understand the error and change the logic according to that the another way is that I start the debugging option on my visual studio code and the system automatically debug the code or give me the suggestion to change the logic which is creating an error.

**Deliver**: How do you manage the delivery and deployment of your project? (specific steps are required 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?

Talking about the delivering project its not easy on the matrix because on matrix we have to match each and every spaces of the output without it matrix do not deliver to the professor so majorly what I do is when I got the error in matrix I open the workshop file in the matrix itself and do same changes by pico file editor and save it that’s how I cannot have to go to again on my putty to do changes in file and upload again and again on matrix. So that’s how I manage to deliver my workshop

Software Version, 5 × 2 points each

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

The software I am using is visual studio 2019 and the version is 16.11.21

What do the components of the version number mean?

Version number refer to the series of all versions released. 16 is the major and 11 is the minor version.

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

The forward compatible means that software is compatible with any other application or software also forward compatible means that I can be use with new hardware or devices.

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

The backward compatibility compatible with the newer technologies with the old version or not updated one or the software that uses the recent version.

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

<https://learn.microsoft.com/en-us/visualstudio/releases/2019/release-notes>

A new top section was added to the Command Center to make it easy to discover how to navigate to files, run commands, and more.