Mohdeep Singh109600239 Msingh820@mySeneca.ca

**Using Mozilla Firefox is strongly recommended for this Activity because it can transform JSON responses into a human readable format.** (Raw Data > "Pretty Print") (#)*is**points for API and Time Zone questions.*

1. (5) What is sent via the API from one system to another? What is sent back?

API sends: Request is sent by API from one system to another, that contains information which is required to manipulate or retrieve data from the receiving systems.

Sent back: Response is sent by API from one system to another system. This contains requested data for the requested action. Some of the formats are plain text, JSON, XML.

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

API URL request:

https://api.agify.io?name=Mohdeep&country\_id=IN

{

"count": 0,

"name": "Mohdeep",

"age": null,

"country\_id": "IN"

}

3. (5) Use the time zone API request at worldtimeapi.org

API URL request: http://worldtimeapi.org/api/timezone/Asia/Dubai

JSON response:

{

"abbreviation": "+04",

"client\_ip": "142.198.182.132",

"datetime": "2023-07-15T05:32:27.745659+04:00",

"day\_of\_week": 6,

"day\_of\_year": 196,

"dst": false,

"dst\_from": null,

"dst\_offset": 0,

"dst\_until": null,

"raw\_offset": 14400,

"timezone": "Asia/Dubai",

"unixtime": 1689384747,

"utc\_datetime": "2023-07-15T01:32:27.745659+00:00",

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

"week\_number": 28

}

4. (16)Using the above JSON data from worldtimeapi.org, fill in the JSON key / value pairs relating to the descriptions in the table below.

|  |  |  |
| --- | --- | --- |
| *See Response Schema* | JSON key | JSON value |
| UTC date/time in ISO8601 format | "utc\_datetime": | 2023-07-15T01:32:27.745659+00:00 |
| Unix UTC timestamp | "unixtime": | 1689384747 |
| Unix UTC to location difference | "raw\_offset": | 14400 |
| Location's daylight-saving time difference | "dst\_offset": | 0 |
| Location date/time in ISO8601 format | "datetime": | 2023-07-15T05:32:27.745659+04:00 |
| How do you calculate the *location's* *timestamp* from the UTC timestamp using JSON keys? | Location timestamp = UTC timestamp + raw\_offset  This would be the formula that I used  Location timestamp = 1689384747 + 14400 = | *Calculated location timestamp value is:*  1689399147 |

**5.**  (5) 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.

To check the calculation of location timestamp is the same as the location time/date in ISO8601 format.

I can convert the calculated timestamp to a readable date/time format and check with the “datetime” value of JSON.

A screenshot of a computer

Description automatically generated

Another way is to copy paste the “1689399147” to “Epoch converter”

A screenshot of a computer

Description automatically generated

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SDLC – Software Development Life Cycle 54 points = 9 points × 6 items, 75+ words each

**Determine**:

To become more familiar and more comfortable with the scope of the assignment, I will carefully and with full attention, understand the whole assignment goals, limitations, requirements and what this assignment needs. I will practice below method to create a plan to complete it.

I will break down my assignment into small pieces of tasks and create a schedule or a plan to organise my workload efficiently.

If somehow, I feel that I am not understanding or have any doubts or questions, I will reach out to my instructor or class fellows for more clarification. Whole time I will make sure I can optimize my mind.

**Define:**

To fully understand the problem, I must examine the question statement and identify the key requirement, including the possible inputs, expected outputs, how the results should perform. It is very necessary to actively listen and communicate effectively to understand the problem very well. I must make sure I will not loose any focus. If I somehow can’t understand or having problem in understanding, I can ask questions, or conduct research to overcome those gaps. This is how “Define” will help in my growth or help in achieving high marks.

**Design**:

Before writing a code or writing a program, I must design a solution by considering the overall structure and architect of the program. This will help me to focus on that area where it requires more time. I need to find out the technical skills required to implement the solution and assess my proficiency in those skills. I can make simple pseudo code or make flow chart to help me visualize the algorithm or logic, how is the flow going on. Also writing comments in the code to explain its function will make easier to maintain and understand. “Design” process will help to organize my work, and workflow in a systematic way.

**Develop:**

To implement design into coding, I will start implementing the solution by writing the source code based on the outline created using pseudocode and flowchart. I will practice clean, modular, and well-documented code, to make best code and organised everything.

I will acquire the readability of my code by adding comments and explanations throughout the code, this will help me to explain complicated sections and make it easier to other people to understand the code in the future. I need to thoroughly test the code to ensure it works correctly and collects any bugs.

If I catch any bugs, I can use debugging tools, to fix them.

**Deliver**:

I must be responsible of delivering and deploying the project according to the guidelines provided by my instructor or the requirement of the project. I will carefully and thoroughly read the specified steps on the matrix server or the designed platform for submitting my work to the system.

If any problem will across my way of delivery or deployment, I will work on trouble shooting and resolving them by referring to the documentation or seeking for help. To complete the assignment, I will reflect the process how its completed and experiences I gained in a concise and thoughtful text.

**D'oh**:

To ensure the system works properly and efficiency, I will organize my source code files, apply version control, and save updates for future use.

Its important to keep track of any changes and updated I make to the source code, so it easy to maintain and understand in the future. As someone who uses my own code, I will address any bugs, problems, or improvements I find and make the necessary adjustments.

By catching the above steps, I can avoid and tackle the assignments related problems and can deliver on time successfully and logically.

Software Version 5 × 2 points each

A. Name of the software is Mozilla Firefox and current version is 115.0.2

B. There are total three components of the version number 1. Major Version 2. Minor Version 3. Patch Version, for e.g. Major;92 Minor;0 Patch;1

C. In this case, Mozilla Firefox, has compatibility to handle future updated, enhancements, changes to software. This software can design to work with future needs without any issues.

D. This means that current version of the software or program is capable of working with the older versions without coming up with any issues. Mozilla Firefox maintains backward compatibility.

E. Release notes (changelog) for Mozilla Firefox:

URL: https://www.mozilla.org/en-US/firefox/115.0.2/releasenotes/

Release date: July 11, 2023

Description in brief:

1. Fixed a startup crash experienced by some Windows 10 and 11 users by blocking instances of a malicious injected DLL (bug 1841751)

2. Fixed a bug with displaying a caret in the text editor on some websites (bug 1840804)

3. Fixed a bug with broken audio rendering on some websites (bug 1841982)

4. Fixed a bug with pattern Transform translate using the wrong units (bug 1840746)

5. A security fix.

6. Fixed a crash affecting Windows 7 users related to the DLL blocklist.