**DAILY ASSESSMENT FORMAT**

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| **Date:** | **09/07/2020** | **Name:** | **PRIYA P RAO** |
| **Course:** | **MATLAB Onramp** | **USN:** | **4AL18EC041** |
| **Topic:** | * **Reviewing Problems** * **Importing Data** * **Logical Arrays** | **Semester & Section:** | **4th sem ‘A’ section.** |
| **Github Repository:** | **Priya-Rao** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session**  **C:\Users\Pawan\Desktop\a3.PNG**  **C:\Users\Pawan\Desktop\a2.PNG** |
| **In today’s session I have studied about:**   * **Chapter 1: Reviewing Problems**   **Bring together concepts that you have learned with a project.**   * **Project – Electricity Usage** * **In MATLAB, NaN (or, "Not a Number") is used to represent missing data.** * **Project – Audio Frequency** * **The C chord recording is stored in a file named Cchord.mat. This file contains two variables:** * **y: signal from recording** * **fs: sampling frequency**   **This task uses the numel function to return the number of elements in an array.**   * **t now has the correct number of points, but it needs to represent the times when the audio signal was sampled. We can use the sampling frequency fs to convert the vector to time (in seconds).** * **In the plot, notice that y is periodic, but it's not a simple sine wave. It's made up of multiple sine waves with different frequencies. A Fourier transform will return information about the frequency content of the signal. The location of the dominant frequencies will show what notes are contained in the chord. we can use the fft function to compute the discrete Fourier transform of a vector. fft(y)The output values from fft are complex numbers. We can use the abs function to get the magnitude.** * **The vector f now contains n points. To convert these points to frequencies, we can multiply the entire vector by the sampling frequency (fs) and divide it by the number of points (n). f will contain frequences from 0 to fs. The dominant frequencies are located at the beginning of f. We can use the xlim function to zoom in on the area of interest. xlim([xmin xmax])** * **Chapter 2: Importing Data**   **Being data from external files into MATLAB.**   * **Import Tool :** * **Importing Data as a Table :** * **To extract a variable from the table, we can use dot notation: data.VariableName** * **If we are working with a table, we might want to keep related data together. Instead of creating separate variables, we can assign the result of a calculation to a table. data.HeightMeters = data.HeightYards\*0.9144**   **If the variable data.HeightMeters doesn't exist, MATLAB will create a new variable in the table with the name HeightMeters.**   * **Chapter 3: Logical Arrays**   **Use logical expressions to help you to extract elements of interest from MATLAB arrays.**   * **Logical Indexing :** * [**Relational operators**](https://www.mathworks.com/help/matlab/matlab_prog/array-comparison-with-relational-operators.html)**, such as >, <, ==, and ~= perform comparisons between two values. The outcome of a comparison for equality or inequality is either 1 (true) or 0 (false).** * **We can compare a vector or matrix to a single scalar value using relational operators. The result is a logical array of the same size as the original array. [5 10 15] > 12**   **ans = 0 0 1**   * **We can use a logical array as an array index, in which case MATLAB extracts the array elements where the index is true. The following example will extract all elements in v1 that are greater than six. v = v1(v1 > 6)**   **v =**  **6.6678**  **9.0698**   * **We can also use logical indexing with two different vectors. v = sample(v1 > 6)**   **v =**  **18**  **23**   * **We You can use logical indexing to reassign values in an array. For example, if you wish to replace all values in the array x that are equal to 999 with the value 1, use the following syntax. x(x==999) = 1** |

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| **Date:** | **09/07/2020** | **Name:** | **PRIYA P RAO** |
| **Course:** | **Internet of Things** | **USN:** | **4AL18EC041** |
| **Topic:** | **Everything Generates Data** | **Semester & Section:** | **4th sem ‘A’ section** |
| **Github Repository:** | **Priya-Rao** |  |  |

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| **AFTERNOON SESSION DETAILS** |
| **Image of session**  **C:\Users\Pawan\Desktop\a4.PNG** |
| **In today’s session I have studied about:**   * **Chapter 1: Everything Generates Data** * **Big Data:**   **What is Big Data?**  **Big data is the lot of data. The three characteristics that indicate an organization may be dealing with Big Data:**   * **They have a large amount of data that increasingly requires more storage space (volume).** * **They have an amount of data that is growing exponentially fast (velocity).** * **They have data that is generated in different formats (variety).**   **Where is Big Data stored?**  **Big data is typically stored on multiple servers, usually housed within data centers. For security, accessibility, and redundancy, the data is usually distributed and/or replicated on many different servers in many different data centers.**  **Supporting Business with Big Data :**   * **Why do business analyze data.** * **Sources of Information** * **Data Visualization** * **Chart type** * **Exploring Analyzed data** * **Analyzing big data for effective use in business** * **Use of excel to forecast** |