**DAILY ASSESSMENT FORMAT**

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| **Date:** | **25-May-2020** | **Name:** | **Raziya Banu** |
| **Course:** | **DSP** | **USN:** | **4AL16EC058** |
| **Topic:** |  | **Semester & Section:** | **8th sem & ‘B’ section** |
| **Github Repository:** |  |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session** |
| **Report –**  In my first session today I have studied about the DSP basic signals. Unit Impulse or Delta Function A signal, which satisfies the condition, δ(t)=limϵ→∞x(t) is known as unit impulse signal. This signal tends to infinity when t = 0 and tends to zero when t ≠ 0 such that the area under its curve is always equals to one. The delta function has zero amplitude everywhere excunit\_impulse.jpgept at t = 0.  Unit Impulse  Properties of Unit Impulse Signal   * δt is an even signal. * δt is an example of neither energy nor power NENP signal. * Area of unit impulse signal can be written as;   A=∫∞−∞δ(t)dt=∫∞−∞limϵ→0x(t)dt=limϵ→0∫∞−∞[x(t)dt]=1   * Weight or strength of the signal can be written as;   y(t)=Aδ(t)   * Area of the weighted impulse signal can be written as −   y(t)=∫∞−∞y(t)dt=∫∞−∞Aδ(t)=A[∫∞−∞δ(t)dt]=A=1=Wigthedimpulse  **Unit Step Signal**  A signal, which satisfies the following two conditions −   * U(t)=1(whent≥0)and * U(t)=0(whent<0)   is known as a unit step signal.  It has the property of showing discontinuity at t = 0. At the point of discontinuity, the signal value is given by the average of signal value. This signal has been taken just before and after the point of discontinuity accordingtoGibb′sPhenomena.  CT Unit Step Signal  If we add a step signal to another step signal that is time scaled, then the result will be unity. It is a power type signal and the value of power is 0.5. The RMS Rootmeansquare value is 0.707 and its average value is also 0.5  **Ramp Signal**  Integration of step signal results in a Ramp signal. It is represented by rt. Ramp signal also satisfies the condition r(t)=∫t−∞U(t)dt=tU(t). It is neither energy nor power NENP type signal.  Ramp Type Signal  **Parabolic Signal**  Integration of Ramp signal leads to parabolic signal. It is represented by pt. Parabolic signal also satisfies he condition p(t)=∫t−∞r(t)dt=(t2/2)U(t) . It is neither energy nor Power NENP type signal.  Parabolic Signal  **Signum Function**  This function is represented as  sgn(t)={1fort>0−1fort<0  It is a power type signal. Its power value and RMS Rootmeansquare values, both are 1. Average value of signum function is zero.  Signum Function |

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| **Date:** | **26-May-2020** | **Name:** | **Raziya Banu** | |
| **Course:** | **Udemy** | **USN:** | **4AL16EC058** | |
| **Topic:** | **Lists in Python** | **Semester & Section:** | **8th sem & ‘B’ section** | |
| **AFTERNOON SESSION DETAILS** | | | |
| **Image of session** | | | |
| **Python List**Python Collections (Arrays) There are four collection data types in the Python programming language:   * **List** is a collection which is ordered and changeable. Allows duplicate members. * **Tuple** is a collection which is ordered and unchangeable. Allows duplicate members. * **Set** is a collection which is unordered and unindexed. No duplicate members. * **Dictionary** is a collection which is unordered, changeable and indexed. No duplicate members.   When choosing a collection type, it is useful to understand the properties of that type. Choosing the right type for a particular data set could mean retention of meaning, and, it could mean an increase in efficiency or security. List A list is a collection which is ordered and changeable. In Python lists are written with square brackets.  Example  Create a List:  thislist = ["apple", "banana", "cherry"] print(thislist) Access Items You access the list items by referring to the index number:  **Example**  Print the second item of the list:  thislist = ["apple", "banana", "cherry"] print(thislist[1]) Negative Indexing Negative indexing means beginning from the end, -1 refers to the last item, -2 refers to the second last item etc.  Example  Print the last item of the list:  thislist = ["apple", "banana", "cherry"] print(thislist[-1]) Range of Indexes You can specify a range of indexes by specifying where to start and where to end the range.  When specifying a range, the return value will be a new list with the specified items.  Example  Return the third, fourth, and fifth item:  thislist = ["apple", "banana", "cherry", "orange", "kiwi", "melon", "mango"] print(thislist[2:5])  By leaving out the start value, the range will start at the first item:  Example  This example returns the items from the beginning to "orange":  thislist = ["apple", "banana", "cherry", "orange", "kiwi", "melon", "mango"] print(thislist[:4])  By leaving out the end value, the range will go on to the end of the list:  Example  This example returns the items from "cherry" and to the end:  thislist = ["apple", "banana", "cherry", "orange", "kiwi", "melon", "mango"] print(thislist[2:]) Range of Negative Indexes Specify negative indexes if you want to start the search from the end of the list:  Example  This example returns the items from index -4 (included) to index -1 (excluded)  thislist = ["apple", "banana", "cherry", "orange", "kiwi", "melon", "mango"] print(thislist[-4:-1]) Change Item Value To change the value of a specific item, refer to the index number:  Example  Change the second item:  thislist = ["apple", "banana", "cherry"] thislist[1] = "blackcurrant" print(thislist) | | | |