

Date:- 26 May 20

Course:- DSP

Topic:- Fourier Series.

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Sem:- 6<sup>th</sup> sem

Sec B sect

\* Today I have learnt:-

- Fourier series and Gibbs phenomena using python
- Fourier transform and its derivative
- Fourier transform & convolution
- Intuition of Fourier transform & Laplace transform
- Laplace transform of first order
- Z transform.

\* Fourier transform of a general function is given & we should find Fourier transform & its derivative.

Above result is to find the Fourier transform of a window function out of the Fourier transform

$$[(t) e^{i\omega t} dt \cdot (t)] = -i\omega F(\omega).$$

\* Here sinusoidal terms has a magnitude (scale factor) and phase (shift)  $\phi$

\* we can represent a an array of numbers giving the values of that function at equally spaced points Fourier & Laplace transforms are very related

\* Z transform is used to convert discrete time domain signal into discrete frequency domain signal

\* It has wide range of applications in mathematics and also in digital signal processing.

\* It is mainly used to analyze and process digital data.

Date:- 26/5/20

Course:- Python

Topic:- Graphical user interface  
with Tkinter

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Sem & 1- 6<sup>th</sup> sem

Sec B sec

\* Create an empty Tkinter window

```
window = Tk()
```

```
def from_kg():
```

\* Get user value from i/p box and multiply by 1000 to get kilograms

```
gram = float(e2.get()) * 1000
```

~~\* Get use~~

\* Like wise we have to multiply by 2.20462 to get pounds

\* and multiply by 35.274 to get ounces

\* Empty the text boxes if they had text from the previous use and fill them again.

```
t1.delete("1.0", END) # to delete the content
```

```
t1.insert(END, gram) # fill the text box
```

```
t2.delete("1.0", END)
```

```
t2.insert(END, pound)
```

```
t3.delete("1.0", END END)
```

```
t3.insert(END, ounce)
```

\* Create a button widget.

```
b1 = button(window, text = "convert", command = from_kg)
```

```
b1.grid(row = 0, column = 2)
```

\* Create three empty text boxes ~~boxes~~ t1, t2 & t3



t1 = Text (window, height=1, width=20)

t1.grid (row=1, column=0)

t2 = text (window, height=1, width=20)

t2.grid (row=1, column=1)

t3 = Text (window, height=1, width=20)

t3.grid (row=1, column=2)

\* This makes sure to keep the main window open  
window.mainloop()

\* databases will interact with python library also.  
So we can use it.

\* many libraries are compatible, but we should prefer  
mysql.connector.