DAY 8 Report

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| Date: | 27 May 2020 | Name: | Srinidhi J C |
| Course: | Digital signal processing | USN: | 4al16ec078 |
| Topic: | 1. Fourier transformation  2. FFT, FFT IN MATLAB  3. FIR AND IIR Filter  4. Welch's methods and winnowing | Semester & Section: | 8th & b |
| Github Repository: | SrinidhiJC078 |  |  |

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| FORENOON SESSION DETAILS |
| Image of session |
| Report – Report can be typed or hand written for up to two pages.    Gaussian functions  Fs = 100; % Sampling frequency  t = -0.5:1/Fs:0.5; % Time vector  L = length(t); % Signal length  X = 1/(4\*sqrt(2\*pi\*0.01))\*(exp(-t.^2/(2\*0.01)));  plot(t,X)  title('Gaussian Pulse in Time Domain')  xlabel('Time (t)')  ylabel('X(t)')  Cosine functions  Fs = 1000; % Sampling frequency  T = 1/Fs; % Sampling period  L = 1000; % Length of signal  t = (0:L-1)\*T;  x1 = cos(2\*pi\*50\*t); % First row wave  x2 = cos(2\*pi\*150\*t); % Second row wave  x3 = cos(2\*pi\*300\*t); % Third row wave  X = [x1; x2; x3];  for i = 1:3  subplot(3,1,i)  plot(t(1:100),X(i,1:100))  title(['Row ',num2str(i),' in the Time Domain'])  end |

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| Date: | 27 May 2020 | Name: | Srinidhi J C | |
| Course: | Phython | USN: | 4al16ec078 | |
| Topic: | 1. Graphical user interface with thinker  2. Interacting with database | Semester & Section: | 8th & b | |
| AFTERNOON SESSION DETAILS | | | |
| Image of session | | | |
| Report – Report can be typed or hand written for up to two pages.  Create a Multi-widget GUI (Practice)  Create a Python program that expects a kilogram input value and converts that value to grams, pounds, and ounces when the user pushes the Convert button.  The program will look similar to the one in the following picture:  Tip:  1 kg = 1000 grams  1 kg = 2.20462 pounds  1 kg = 35.274 ounces  Solution  from tkinter import \*  # Create an empty Tkinter window  window=Tk()  def from\_kg():  # Get user value from input box and multiply by 1000 to get kilograms  gram=float(e2\_value.get())\*1000  # Get user value from input box and multiply by 2.20462 to get pounds  pound=float(e2\_value.get())\*2.20462  # Get user value from input box and multiply by 35.274 to get ounces  ounce=float(e2\_value.get())\*35.274  # Empty the Text boxes if they had text from the previous use and fill them again  t1.delete("1.0", END) # Deletes the content of the Text box from start to END  t1.insert(END,gram) # Fill in the text box with the value of gram variable  t2.delete("1.0", END)  t2.insert(END,pound)  t3.delete("1.0", END)  t3.insert(END,ounce)  # Create a Label widget with "Kg" as label  e1=Label(window,text="Kg")  e1.grid(row=0,column=0) # The Label is placed in position 0, 0 in the window  e2\_value=StringVar() # Create a special StringVar object  e2=Entry(window,textvariable=e2\_value) # Create an Entry box for users to enter the value  e2.grid(row=0,column=1)  # Create a button widget  # The from\_kg() function is called when the button is pushed  b1=Button(window,text="Convert",command=from\_kg)  b1.grid(row=0,column=2)    # Create three empty text boxes, t1, t2, and 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()  Querying data from a MySQL database  In previous videos I explained how to interact with PostGreSQL databases. If you prefer to work with MySQL instead of PostGreSQL, see the code further down.  I set up a remote MySQL database on a server with the IP address 108.167.140.122, so you don't have to install and set up a MySQL database yourself. To connect and query data from that remote database, you need a username, password, and the name of the database. These are written inside the Python s  cript below.  You also need a Python library that interacts with MySQL databases. Many libraries are compatible, but I prefer mysql.connector. To install mysql.connector: simply execute pip install mysql-connector or pip3 install mysql-connector depending on whether you use pip or pip3. Once you install the libr  ary, try this working example:  import mysql.connector  word = input("Enter a word in English and press Enter: ")  con = mysql.connector.connect(  user="ardit700\_student",  password = "ardit700\_student",  host="108.167.140.122",  database = "ardit700\_pm1database"  )  cursor = con.cursor()  query = cursor.execute("SELECT \* FROM Dictionary WHERE Expression = '%s'" % word)  results = cursor.fetchall()  if results:  for result in results:  print(result[1])  else:  print("We couldn't find any results about that.") | | | |