DAILY ASSESSMENT FORMAT

Date:	27/05/2020	Name:	Prajwal Kamagethi Chakravarti P L
Course:	Python	USN:	4AL17EC073
Topic:	1.Graphical User Interface with Tkinter 2.Interacting with databases	Semester & Section:	6 & B
Github Repository:	https://github.com/alvas-education-foundation/Prajwal-Kamagethi.git		

| FORENOON SESSION DETAILS |
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| Report – Report can be typed or hand written for up to two pages. |

In this section Creation of the GUI application main window.Add one or more of the above-mentioned widgets to the GUI application.Enter the main event loop to take action against each event triggered by the user.

Tkinter provides various controls, such as buttons, labels and text boxes used in a GUI application. These controls are commonly called widgets.Making widgets functional involves the pressing of keys on a keyboard, and mouse clicks. The simplest way to add functionality to a button is by adding a callback function is mentioned in the form of command = some callback in the widget option.After defining the callback, we can connect it to GUI.Then we also learnt on how to create a multi widget GUI.

The program starts by importing the sqlite3 library.Then we establish a connection to the database.

We are using SQLite, so we need to specify is the name of the database file.Then it uses this connection to create a cursor.Then we use that cursor to ask the database to execute anything for us.The query is written in SQL, and passed to cursor.execute as a string.The database returns the results of the query to us.Then we learnt on some of the formatting techniques like inserting, deleting, and updating.Psycopg2 is the most popular python driver for PostgreSQL.We need to install Psycopg2 to use PostgreSQL from Python. Similar to SQLite, we learnt the same formatting techniques for PostgreSQL too.

Date:	27-05-2020	Name:	Prajwal Kamagethi Chakravarti P L
Course:	Digital signal processing	USN:	4AL17EC073
Topic:	1. .Fourier transform 2.FFT Using MATLAB 3.Study and Analysis of FIR and IIR 4.Filtering Signal ECG Signal Analysis	Semester & Section:	6TH & B
Github Repository:	https://github.com/alvas-education-foundation/Prajwal-Kamagethi.git		
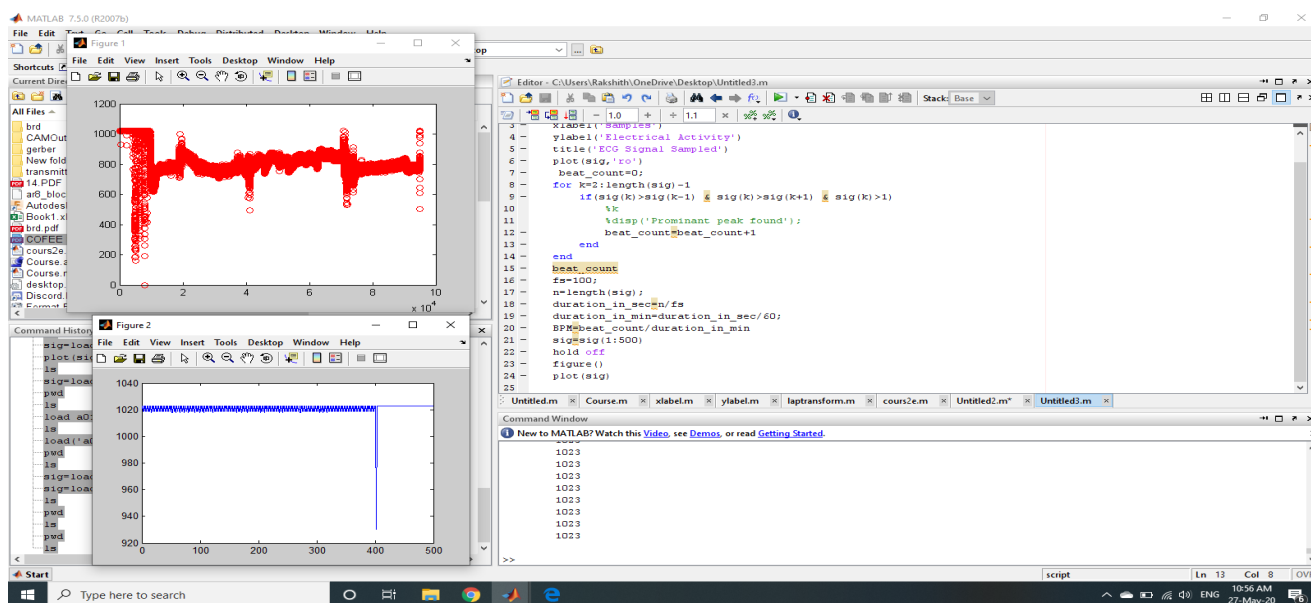
Report:

MATLAB software saves and reduces a lot of time in routine calculations and application for mathematicians, physicist, engineers and scientists. In this work Laplace transform are defined and applied for solving an ODE example classically, MATLAB program are used to programming Laplace transformation for initial value problem, second order ordinary differential equations with constant coefficient, MATLAB function are constructed, estimates exact solution in less than a second, which makes easy and useful for researcher, and generates the graph of exact solution.

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constructed, estimates exact solution in less than a second, which makes easy and useful for researcher, and generates the graph of exact solution. MATLAB program is possible to simulate the Laplace transformable equations directly which has made a good advancement in the research.

Matlab code for Fast Fourier Transform

```
clear all;
close all;
clc;
fs=1000
ts=1/fs
dt=0:ts:5-ts
f1=10;
f2=30;
f3=70

y1=10*sin(2*pi*f1*dt)
y2=10*sin(2*pi*f2*dt)
y3=10*sin(2*pi*f3*dt)
y4=y1+y2+y3

subplot (4,1,1)
plot (dt, y1,'r')

subplot (4,1,2)
plot (dt, y2,'r')

subplot (4,1,3)
plot (dt, y3,'r')

subplot (4,1,4)
plot (dt, y4,'r')

nfft=length(y4)
nfft2=2^nextpow2(nfft)
ff=fft (y4, nfft2)
fff=ff (1: nfft2/2)
figure ()
xfft=fs*(0: nfft2/2)/nfft2
plot(abs(fff))
```