Date 27/5/2020 Name: Poojary Sushant

course: Digital signal Processing USN:- 4 AL18EC400

Topic:- FFT using Matlab, Sem:- 6th sem 'B' sec.

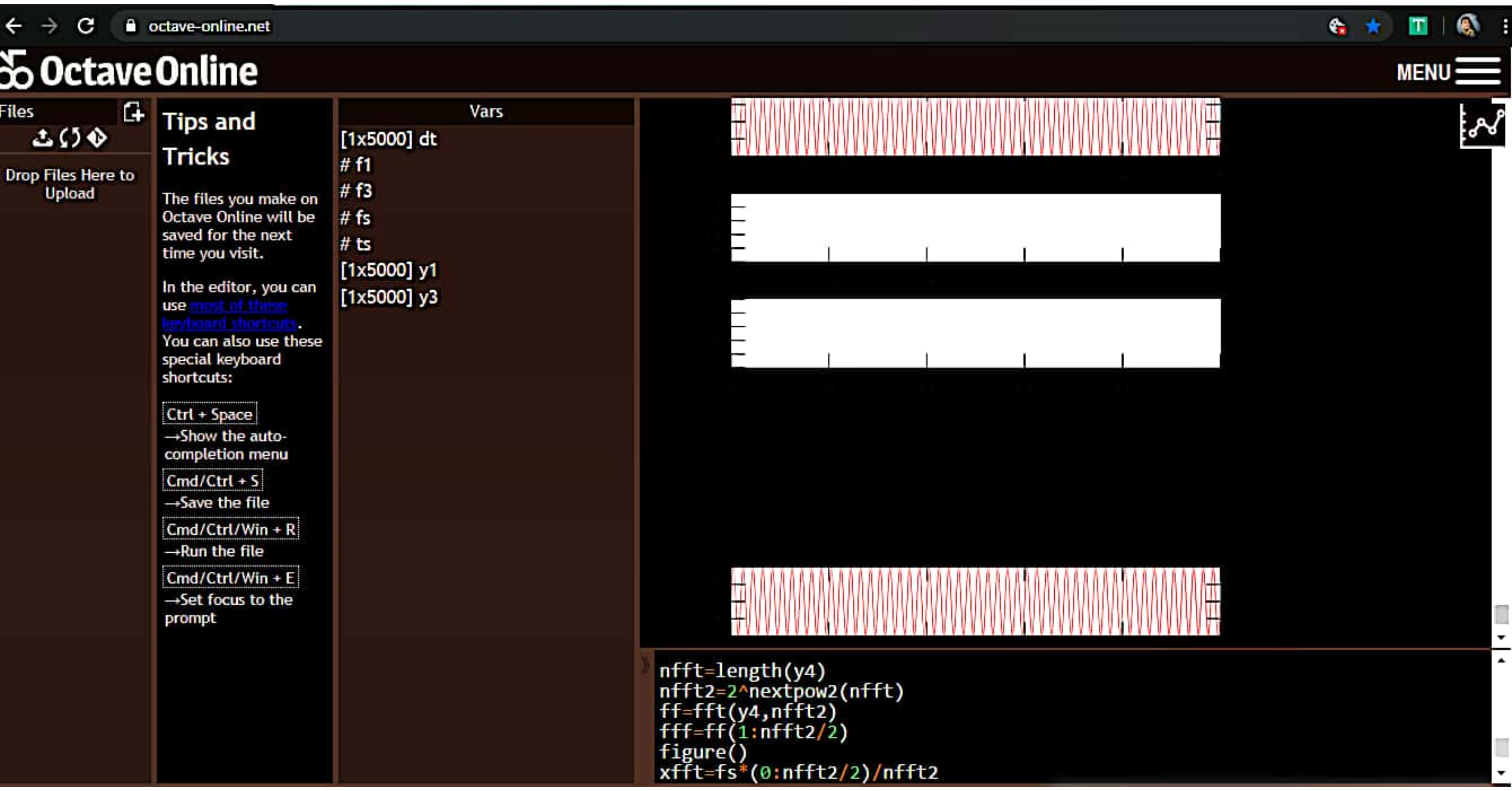
Fast Fourier Transform using Matlab

```
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, nfft 2)
fff = ff (1:nfft2/2)
```

```
figure ()
 xfft=fs*(0:nfft2/2)/nfft2
  plot (abs (fff))
```

ECG signal Analysis usin Matlab

```
sig = load ('ecg.cv')
Plot (sig)
xlabel ('samples')
ylobel ('Electical Activity')
title ('ECG signal sampled')
plot (sig, 'ro')
 beat_count = 0;
 for k = 2: length (sig)-1
     if (sig(k)> sig(k-1) &sig (k)>sig(k+1) &sig(k) >1
        %k
        % disp (' Prominant peak found');
        beat_count = beat_count +1
     end
   end
beat_count
 fs = 100;
n = length (sig);
duration_in_sec = n/fs
duration_in_min = duration_in sec/60
BPM = beat_count/ duration_in_min
 sig = sig(1:500)
 hold off
   figure ()
  plot(sig)
```



Tips and Tricks

The files you make on Octave Online will be saved for the next time you visit.

In the editor, you can use most of these keyboard shortcuts. You can also use these special keyboard shortcuts:

Ctrl + Space
→Show the auto-completion menu

Cmd/Ctrl + S
→Save the file

Cmd/Ctrl/Win + R
→Run the file

Cmd/Ctrl/Win + E
→Set focus to the prompt

```
[1x5000] dt
# f1
# f3
# fs
# ts
[1x5000] y1
[1x5000] y3
```

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

Date:- 27 May 2020
Course :- Python on Udemy
Topic GUI with Tkinter

Name:- Poojary sushant
USN:- 4AL18EC400
Semester : 6th 'B'

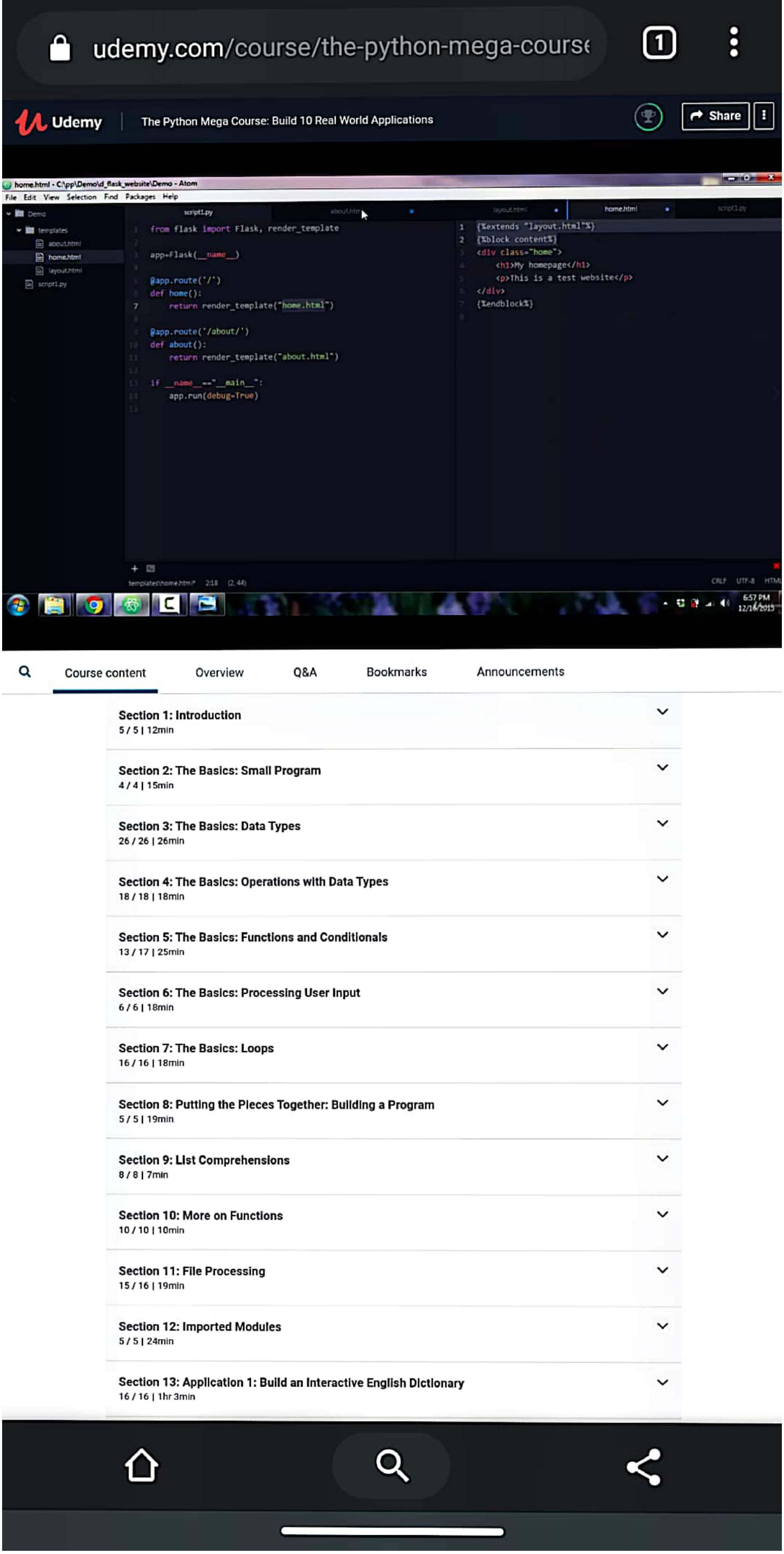
GUI with Tkinter

```
from tkinter import*
window = Tk()
def km_to_miles():
        miles =float (e1_valve.get()) * 1.6
        t1. insert (END, miles)
b1 = Button (window, text = "Execute", command = km_to_miles)
b1.grid (row=0, column =0)
e1 - Value = stringVar()
e1 = Entry (window, textvariable =e1_valve)
e1.grid (row= 0, column =1)
t1= Text (window, height =1, width = 20)
t1.grid (row =0, column =2)
window.mainloop ()
```

Interfacing with database:

```
~~d~~ import sqlite3
 def create_table ():
        conn =sqlite3.connect("lite.db")
        cur = conn.cursor()
        cur.execute("Create Table if not exists store(iteam TExt
quantity ,INTEGER, Price REAL)")
        conn.commit()
        conn.close ()
ded     insert (item, quantity, price)
```

```
        conn= sqlite3.connect ("lite.db")
        cur= conn.cursor()
        cur.execute ("INSERT INTO stor values (?,?,?)",
        (item quantity, price))
        conn.commit()
        conn.close()
insert ("plates", 10,5)
def view():
        conn= sqlite3.connect ("lite.db")
        cur = conn.cursor()
        cur.execute ("select *from store")
        rows =cur.fetchall()
        conn.close()
        ~~row~~ return rows
print(view())
```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templates
about.html
home.html
layout.html
script1.py
script1.py
about.html
layout.html
home.html
script1.py
templates\home.html* 2:18 (2, 44)
CRLF UTF-8 HTML
6:57 PM
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```
from flask import Flask, render_template

app=Flask(__name__)

@app.route('/')
def home():
    return render_template("home.html")

@app.route('/about/')
def about():
    return render_template("about.html")

if __name__=="__main__":
    app.run(debug=True)
```

```
{%extends "layout.html"%}
{%block content%}
<div class="home">
    <h1>My homepage</h1>
    <p>This is a test website</p>
</div>
{%endblock%}
```

Section 1: Introduction
5 / 5 | 12min

Section 2: The Basics: Small Program
4 / 4 | 15min

Section 3: The Basics: Data Types
26 / 26 | 26min

Section 4: The Basics: Operations with Data Types
18 / 18 | 18min

Section 5: The Basics: Functions and Conditionals
13 / 17 | 25min

Section 6: The Basics: Processing User Input
6 / 6 | 18min

Section 7: The Basics: Loops
16 / 16 | 18min

Section 8: Putting the Pieces Together: Building a Program
5 / 5 | 19min

Section 9: List Comprehensions
8 / 8 | 7min

Section 10: More on Functions
10 / 10 | 10min

Section 11: File Processing
15 / 16 | 19min

Section 12: Imported Modules
5 / 5 | 24min

Section 13: Application 1: Build an Interactive English Dictionary
16 / 16 | 1hr 3min