

DAILY ASSESSMENT FORMAT

Date:	27-05-2020	Name:	Yashaswini R
Course:	Digital signal processing	USN:	4AL17EC098
Topic:	Ft,fast fourier transform,fir andiir filters,fda tool usage in matlab,intro to wt,cwt&dwt,short time ft and spectrogram,welch's methond and windowing,ecg signal analysis using matlab.	Semester & Section:	6 th & B
Github Repository:	Yashaswini		

FORENOON SESSION DETAILS

Image of session

1.

1. Fourier Transforms | Definition and Formula | Must Watch

57,656 views • Sep 18, 2019

Udemey

2.

YouTube video player interface showing a video titled "Simple and Easy Tutorial on FFT Fast Fourier Transform Matlab Part 1". The video is by asraf mohamed, has 225,794 views, and was uploaded on Nov 22, 2015. The video player shows a MATLAB script for FFT processing.

Up next recommendations:

- Simple and Easy Tutorial on FFT Fast Fourier Transform Matlab... asraf mohamed 70K views • 4 years ago
- Denoising Data with FFT [Matlab] Steve Brunton 2.7K views • 1 month ago
- Fourier Transform, Fourier Series, and frequency spectrum Physics Videos by Eugene K... 2.1M views • 4 years ago
- The first 20 hours -- how to learn anything | Josh Kaufman... TEDx Talks Recommended for you
- What is 0 to the power of 0? Eddie Woo Recommended for you
- TCS CodeVita Questions | Divine Divisors Question | FAC... New

3.

YouTube video player interface showing a video titled "Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) Filters". The video is by Adam Panagos, has 2,142 views, and was uploaded on Nov 19, 2019. The video player shows a presentation slide about FIR filters.

Up next recommendations:

- A Time-Domain Digital Filter Design Criteria Adam Panagos 620 views • 6 months ago
- Overview of FIR and IIR Filters Barry Van Veen 207K views • 7 years ago
- For the Love of Physics - Walter Lewin - May 16, 2011 Lectures by Walter Lewin. They w... Recommended for you
- The first 20 hours -- how to learn anything | Josh Kaufman... TEDx Talks Recommended for you
- DT7: Digital Filter Design Adam Panagos
- The Fourier Transform and Convolution Integrals Steve Brunton 5K views • 2 months ago

Report – Report can be typed or hand written for up to two pages.

Today I have learnt:

- FFT: Fast Fourier Transform and using matlab
 - FIR and IIR Filters
 - Study and analysis FIR and IIR using FDA tool in MatLab
 - Introduction to WT,CWT and DWT
 - Implementation of signal Filtering signal using WT in MatLab
 - Short-time Fourier Transform and the Spectrogram
 - Welch's method and windowing
 - ECG Signal Analysis Using MATLAB
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- **FFT:** A **fast Fourier transform (FFT)** is an algorithm that computes the discrete **Fourier transform** (DFT) of a sequence, or its inverse (IDFT). **Fourier** analysis converts a signal from its original domain (often time or space) to a representation in the frequency domain and vice versa.
 - **FFT IN MATLAB:**

```
m = length(whaleMoan);  
n = pow2(nextpow2(m));  
y = fft(whaleMoan,n);  
f = (0:n-1)*(fs/n)/10; % frequency vector  
power = abs(y).^2/n; % power spectrum  
plot(f(1:floor(n/2)),power(1:floor(n/2)))  
xlabel('Frequency')  
ylabel('Power')
```
 - **FIR and IIR Filters:**
In signal processing, a finite impulse response (**FIR**) **filter** is a **filter** whose impulse response (or response to any finite length input) is of finite duration, because it settles to zero in finite time.
Infinite impulse response is a property applying to many linear time-invariant systems that are distinguished by having an impulse response h which does not become exactly zero past a certain point, but continues indefinitely.
 - **FDA tool in matlab:** Infinite impulse response is a property applying to many linear time-invariant systems that are distinguished by having an impulse response h which does not become exactly zero past a certain point, but continues indefinitely.
 - **Introduction to WT,CWT and DWT:** In mathematics, a wavelet series is a representation of a square-integrable function by a certain orthonormal series generated by a wavelet.
 - The wavelets in the CWT and nondecimated discrete wavelet transform are technically called frames, they are linearly-dependent sets. The DWT is not shift-invariant. Because the DWT downsamples, a shift in the input signal does not manifest itself as a simple equivalent shift in the DWT coefficients at all levels.

- A **spectrogram** is a visual representation of the spectrum of frequencies of a signal as it varies with time. When applied to an audio signal, spectrograms are sometimes called sonographs, voiceprints, or voicegrams.
- **Welch's method** (also called the periodogram method) for estimating power spectra is carried out by dividing the time signal into successive blocks, forming the periodogram for each block, and averaging. is the rectangular window, the periodograms are formed from non-overlapping successive blocks of data.
- Since **ECG signals** are very noisy, usually 50Hz noise, **MATLAB** was used to test and adjust a digital filter [4], in order to obtain a good QRS complex, which represents the ventricular depolarization in the **ECG**, i.e., it shows the electrical impulse of heart as it passes through the ventricles.

Date:	27-05-2020	Name:	Yashaswini R
Course:	UDEMY PYTHON MEGA_COURSE	USN:	4AL17EC030
Topic:	Application 5: Build a Desktop Database Application	Semester & Section:	6th &B

AFTERNOON SESSION DETAILS

The screenshot displays the UDEMY Python Mega Course: Build 10 Real World Applications. The main window shows a code editor with Python code for a desktop database application. The code includes functions for inserting, deleting, and updating data in a SQLite database, and a Tkinter GUI for a 'BookStore' application. The right sidebar shows the course content, including sections on interacting with databases and building a desktop database application. The bottom of the screen shows the Windows taskbar with the time 11:23 AM on 27-05-2020.

Report – Report can be typed or hand written for up to two pages.

Today I have learnt :

- Desktop Database App - How The Output Will Look Like
- User Interface Design
- Frontend Interface
- Backend
- Connecting the Frontend to the Backend-Part 1
- Connecting the Frontend to the Backend,Part 2
- Fixing the Bug (Practice)
- Solution
- Creating a standalone executable version of the program

Program:

```
def get_selected_row(event):  
    try:  
        global selected_tuple  
        index=list1.curselection()[0]  
        selected_tuple=list1.get(index)  
        e1.delete(0,END)  
        e1.insert(END,selected_tuple[1])  
        e2.delete(0,END)  
        e2.insert(END,selected_tuple[2])  
        e3.delete(0,END)  
        e3.insert(END,selected_tuple[3])  
        e4.delete(0,END)  
        e4.insert(END,selected_tuple[4])  
    except IndexError:  
        pass
```

Explanation

The error was fixed by simply implementing a `try` and `except` block. When the `get_selected_row` function is called, Python will execute the indented block under `try`. If there is an `IndexError`, none of the lines under `try` will be executed; the

line under `except` will be executed, which is `pass`. The `pass` statement means "do nothing". Therefore the function will do nothing when there's an empty listbox.