# DAILY ASSESSMENT FORMAT

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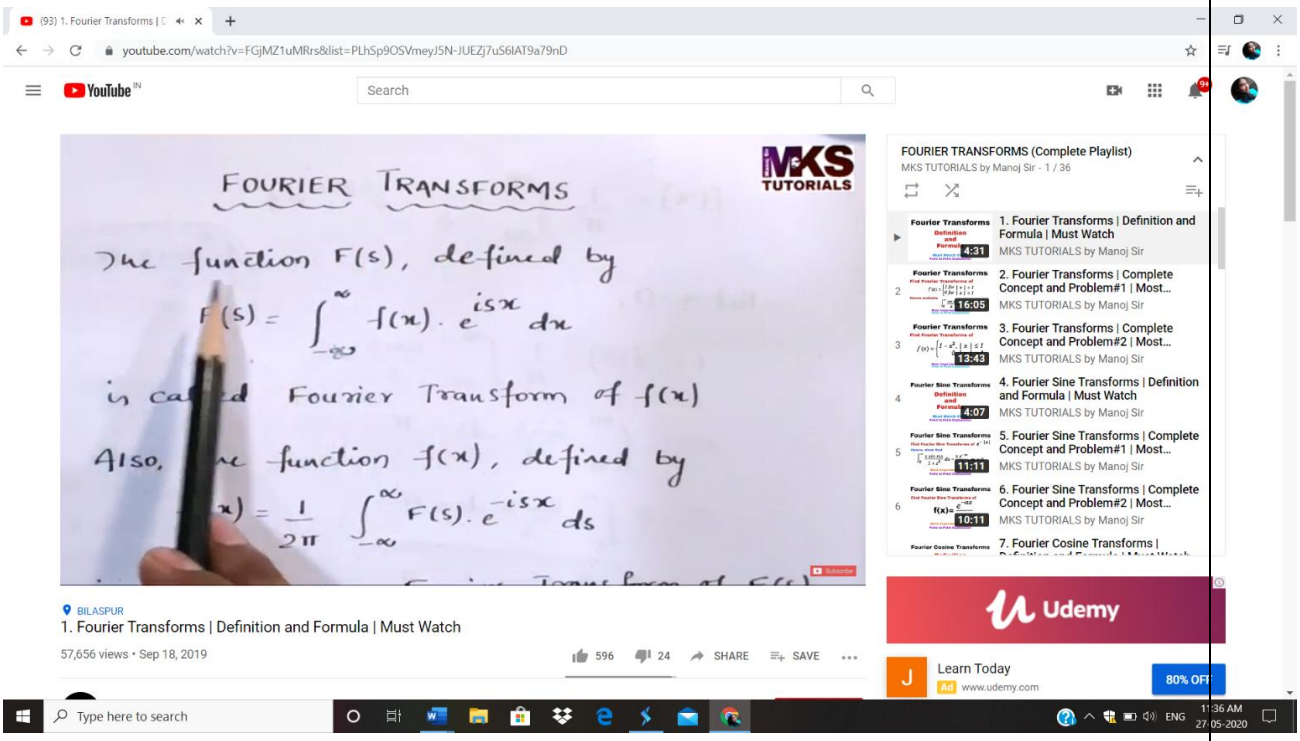
| **Date:** | **27-05-2020** | **Name:** | **Yashaswini R** |
| **Course:** | **Digital signal processing** | **USN:** | **4AL17EC098** |
| **Topic:** | **Ft,fast fourier transform,fir andiir filters,fda tool usage in matlab,intro to wt,cwt&dwt,short time ft and spectrogram,welch's methond and windowing,ecg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

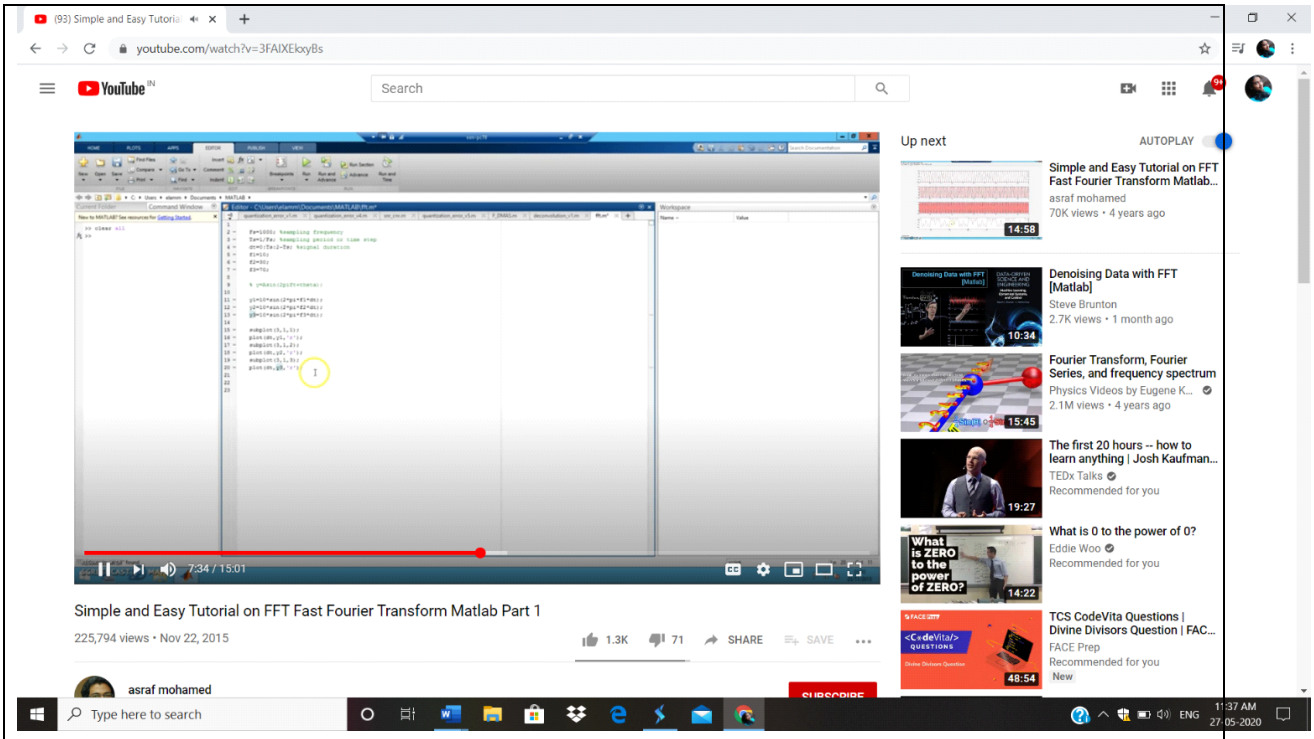
## FORENOON SESSION DETAILS

**Image of session**

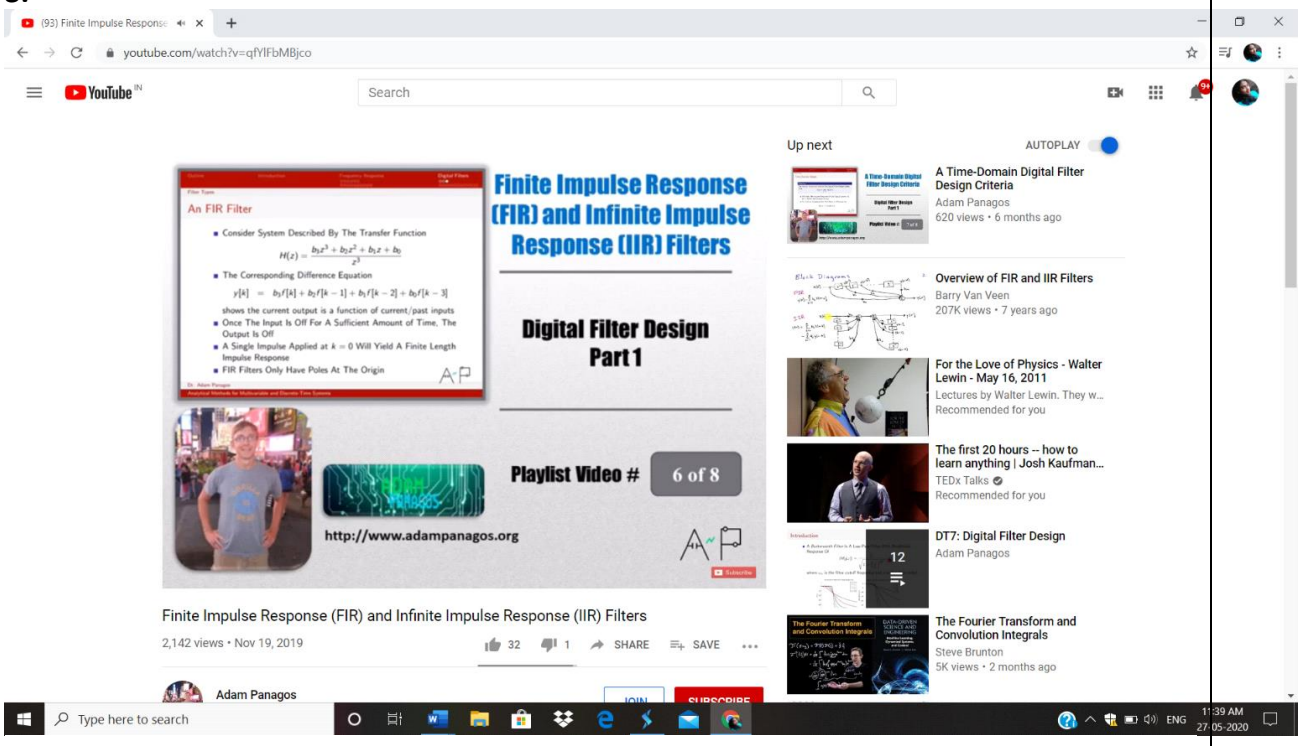
**1.**




**2.**




**3.**




**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 Spectogram
- Welch's method and windowing
- ECG Signal Analysis Using MATLAB

- **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** |
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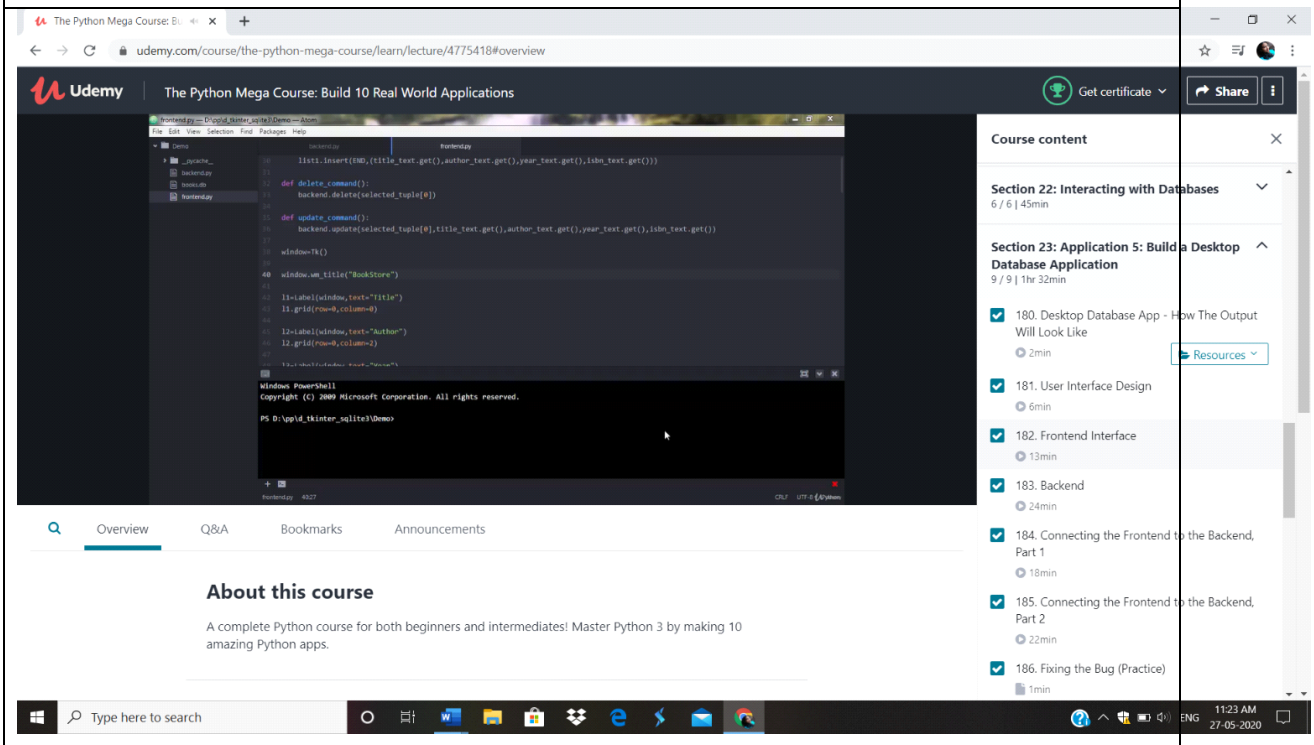
| **Course:** | **UDEMY PYTHON MEGA_COURSE** | **USN:** | **4AL17EC030** |
| **Topic:** | **Application 5: Build a Desktop Database Application** | **Semester & Section:** | **6th &B** |

**AFTERNOON SESSION DETAILS**



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

## Today I have learnt :

- Desktop Database App - How The OutputWill 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.