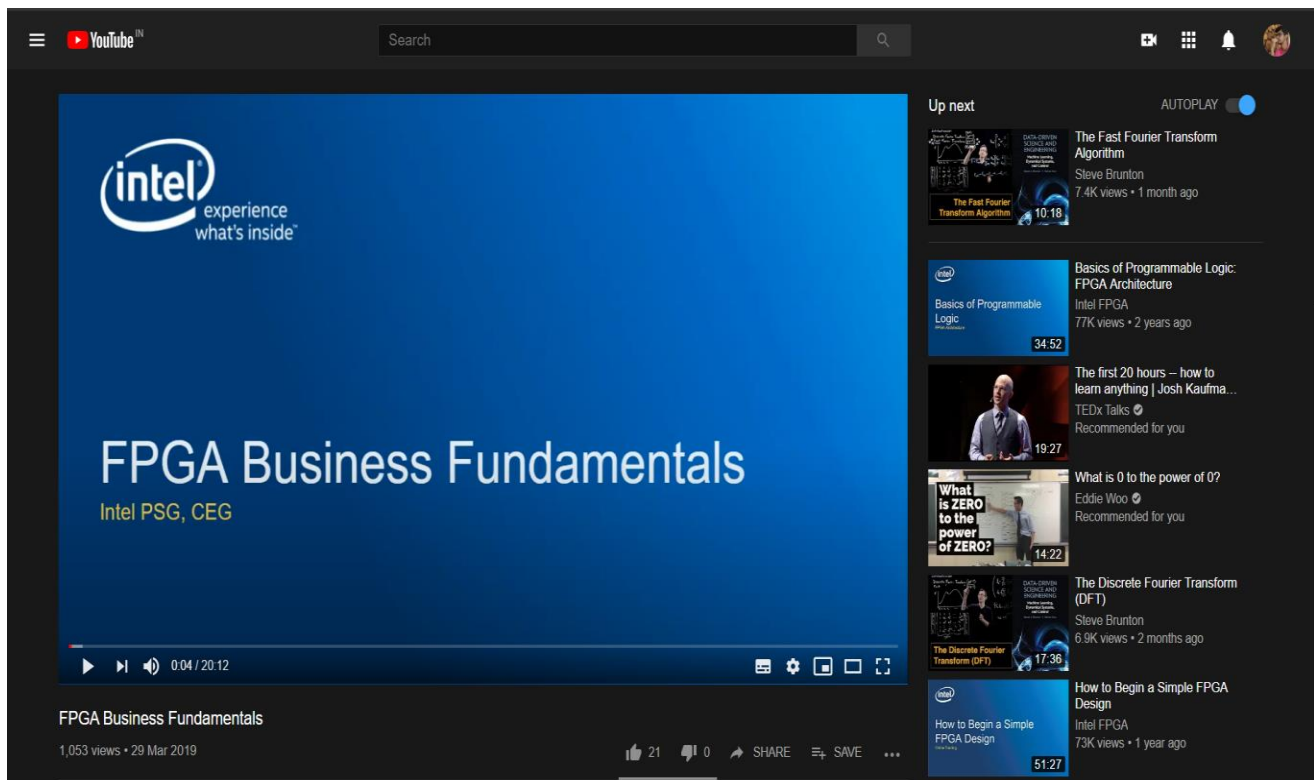


## DAILY ASSESSMENT REPORT

Date:	01 June 2020	Name:	Gagan M K
Course:	DIGITAL DESIGN USING HDL	USN:	4AL17EC032
Topic:	<ul style="list-style-type: none"> <li>Industry Applications of FPGA</li> <li>FPGA Business Fundamentals</li> <li>FPGA vs ASIC Design Flow</li> <li>FPGA Basics – A Look Under the Hood</li> </ul>	Semester & Section:	6 <sup>th</sup> sem & 'A' sec
Github Repository:	Alvas-education-foundation/Gagan-Git		

### FORENOON SESSION DETAILS

#### Image of session



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

### Industry Applications of FPGA:

- The impact of new FPGA features in industrial applications is analyzed in detail in three main areas, namely digital real-time simulation, advanced control techniques, and electronic instrumentation, with focus on mechatronics, robotics, and power systems design.

### FPGA vs ASIC Design Flow:

	FPGA	ASIC
NRE	✓	
Performance		✓
Time to market	✓	
Design Flow	✓	
Cost per Unit (High volume)		✓
Barrier to Entry	✓	
Energy Efficiency		✓
Analog Blocks		✓

**Write a verilog code to implement NAND gate in all different styles:**

**1. Gate Level Code:**

```
module NAND_2_gate_level(output Y, input A, B);  
    wire Yd;  
    and(Yd, A, B);  
    not(Y, Yd);  
endmodule
```

**2. Data Flow Code:**

```
module NAND_2_data_flow (output Y, input A, B);  
    assign Y = ~(A & B);  
endmodule
```

**3. Behavioral Modelling code:**

```
module NAND_2_behavioral (output reg Y, input A, B);  
always @ (A or B) begin  
    if (A == 1'b1 & B == 1'b1) begin  
        Y = 1'b0;  
    end  
    else  
        Y = 1'b1;  
    end  
end  
endmodule
```

Date:	01 June 2020	Name:	Gagan M K
Course:	The Python Mega Course	USN:	4AL17EC032
Topic:	Application 6: Build a Webcam Motion Detector	Semester & Section:	6 <sup>th</sup> sem & 'A' sec

### AFTERNOON SESSION DETAILS

Image of session:

The screenshot displays the Udemy interface for the course 'The Python Mega Course: Build 10 Real World Applications'. The video player shows a man's face with green bounding boxes, indicating a motion detector application. The right sidebar shows the course content list, including sections 24 through 33. The bottom section is titled 'About this course' and describes it as a complete Python course for beginners and intermediates.

**Course content**

- 224. Detecting Webcam Objects (30min)
- 225. Capturing Motion Time (21min)
- Section 28: Interactive Data Visualization with Bokeh (0 / 17 | 58min)
- Section 29: Webscraping with Python Beautiful Soup (0 / 4 | 23min)
- Section 30: Application 7: Scrape Real Estate Property Data from the Web (0 / 8 | 1hr 14min)
- Section 31: Application 8: Build a Web-based Financial Graph (0 / 12 | 1hr 40min)
- Section 32: Application 9: Build a Data Collector Web App with PostgreSQL and FL... (0 / 11 | 2hr 47min)
- Section 33: Application 10: Project Exercise on Building a Geocoder Web Service (0 / 4 | 30min)

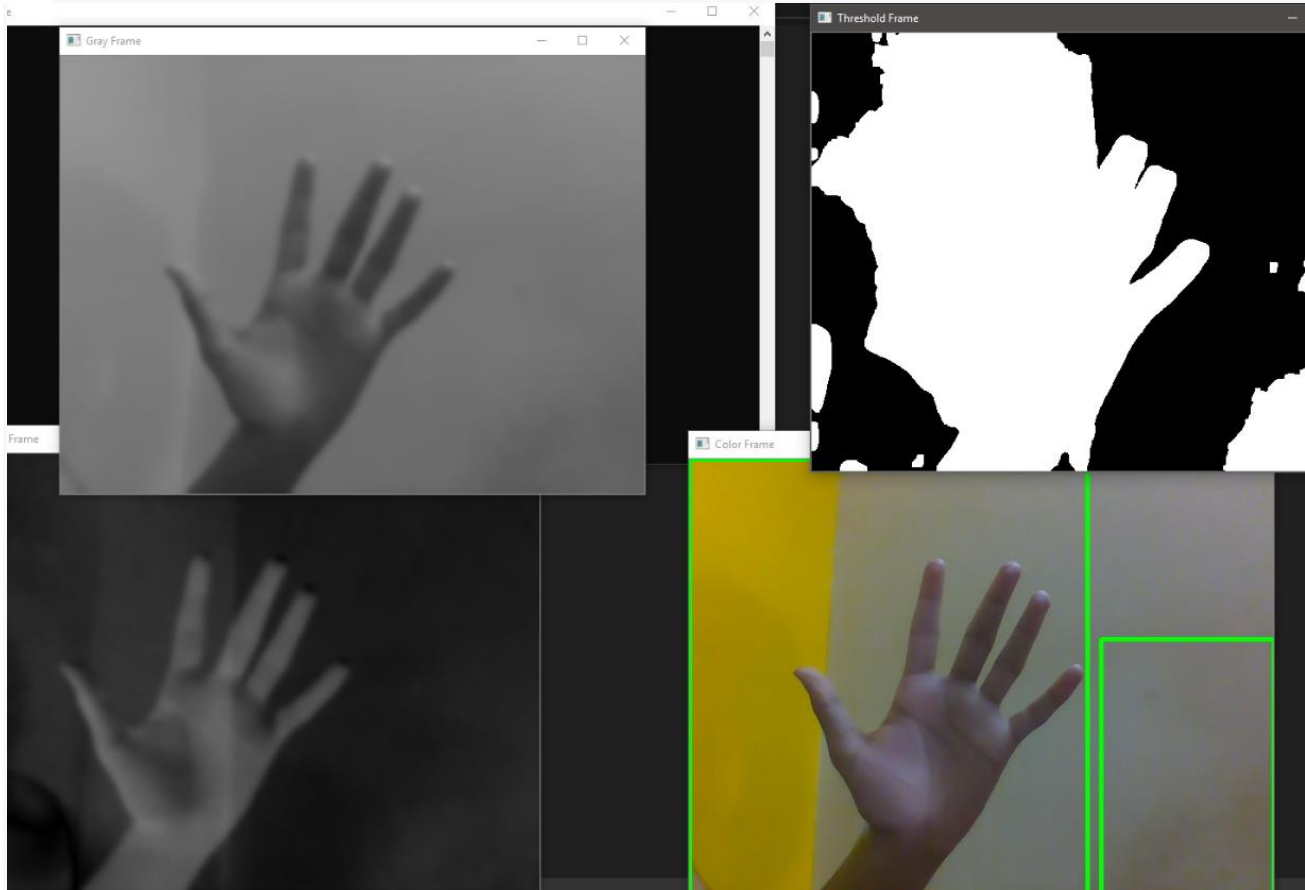
**About this course**

A complete Python course for both beginners and intermediates! Master Python 3 by making desktop, web, and mobile apps.

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

### Build a Webcam Motion Detector:

- In this Application we learnt about building a Webcam Motion Detector.
- Creating Gray scale images and converting it into white and black.
- Also having raw colored images to detect motion.
- When motion is detected it starts noting the time at which the motion is detected.
- And that time and date is stored in excel file.



- Time at which motion was detected and saved in excel sheet is shown below.

A	B	C
	Start	End
0	37:53.7	37:59.4
1	37:59.9	37:59.9
2	38:03.1	38:04.2
3	38:06.0	38:07.1
4	38:08.9	38:10.0
5	38:10.7	38:14.8

## RPA(Robotic Process Automation) Certificate:



- The above mention course was interesting and useful.
- Got to learn about UiPath tool for academic purpose.
- Learnt basic robot building like "Helloworld"
- Also learnt to build basic automated bot to search movies in various websites.