**DAILY ASSESSMENT FORMAT**

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| **Date:** | **03-06-2020** | **Name:** | **Dhanya Shetty** |
| **Course:** | **DIGITAL DESIGN USING HDL** | **USN:** | **4AL17EC026** |
| **Topic:** | **1.EDA PLAYGROUND ONLINE COMPILER**  **2.EDA PLAYGROUND TUTORIAL DEMO VIDEO**  **3.HOW TO DOWNLOAD AND INSTALL XILINX VIVADO DESIGN SUITE**  **4.VIVADO DESIGN SUITE FOR IMPLEMENTATION OF HDL CODE** | **Semester & Section:** | **6th A** |
| **Github Repository:** | **Dhanya Shetty\_026** |  |  |

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| **FORENOON SESSION DETAILS** |
| C:\Users\Hp\Desktop\report\Screenshot_20200603-184905.png  **C:\Users\Hp\Desktop\report\Screenshot_20200603-184932.png**  **C:\Users\Hp\Desktop\report\Screenshot_20200603-185001.png**  C:\Users\Hp\Desktop\report\20200603_185034.jpg  C:\Users\Hp\Desktop\report\20200603_185043.jpg |
| |  |  |  | | --- | --- | --- | | **Date: 03June2020** |  | **Name: Dhanya Shetty** | | **Course: Python** |  | **USN:4AL17EC026** | | **Topic: section 26**  **Python for Image and Video Processing with OpenCV** |  | **Semester & Section:6th A** | |
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| **AFTERNOON SESSION DETAILS** | |
| **Image of sessionsC:\Users\Hp\Desktop\report\03JUNE11111.PNG**  C:\Users\Hp\Desktop\report\03JUNE22222.PNG  C:\Users\Hp\Desktop\report\03JUNE3333.PNG  Computer vision is a huge part of the data science/AI domain. Sometimes, computer vision engineers have to deal with videos. Here, we aim to shed light on video processing — using [**Python**](https://opendatascience.com/category/tools-languages/python/), of course.This might be obvious for some, but nevertheless, video streaming is not a continuous process, but a discrete one.That means, each time we deal with videos, we are actually dealing with the sequence of frames themselves. Each frame is just an image, which might be represented as an m x n array of pixels, where (m,n) is picture size. Each pixel might be represented as color intensity, depending on which color model we are using (gray-scale, RGB, or even multispectrum). Let’s get acquainted with the main video processing tool for Python — [**OpenCV**](https://opencv.org/). OpenCV is an open source library which provides us with the tools to perform almost any kind of image and video processing. [**OpenCV**](https://opendatascience.com/?s=opencv) is written in C++ and its primary interface is in C++. The OpenCV code is hard to develop and maintain, due to its methods naming, error logging, and sometimes weird code structures.  **OOP – Object Oriented Programming**  ***O****bject-****o****riented****p****rogramming* (**OOP**) refers to a type of computer programming (software design) in which [programmers](https://www.webopedia.com/TERM/P/programmer.html) define the [data type](https://www.webopedia.com/TERM/D/data_type.html) of a [data structure](https://www.webopedia.com/TERM/D/data_structure.html), and also the types of operations ([functions](https://www.webopedia.com/TERM/F/function.html)) that can be applied to the data structure.  In this way, the data structure becomes an [object](https://www.webopedia.com/TERM/O/object.html) that includes both [data](https://www.webopedia.com/TERM/D/data.html) and functions. In addition, programmers can create relationships between one object and another. For example, objects can inherit characteristics from other objects.  ***The Basic OOP Concepts***  If you are new to object-oriented programming languages, you will need to know a few basics before you can get started with code. The following Webopedia definitions will help you better understand object-oriented programming:  [**The Challenges of Cloud Integration**](https://o1.qnsr.com/cgi/r?;n=203;c=1639922;s=9534;x=7936;f=201705191426590;u=j;z=TIMESTAMP;k=https://assetform.webopedia.com/controller?asset=175119710&srvid=95900&vkey=4190310&io=11111&qset=CONTACTFORM_HQB&formHQB=y&domain=www.webopedia.com&widgetsrc=mwidget)   * [**Abstraction**](https://www.webopedia.com/TERM/A/abstraction.html)**:** The process of picking out (abstracting) common features of objects and procedures. * [**Class**](https://www.webopedia.com/TERM/C/class.html)**:** A category of objects. The class defines all the common properties of the different objects that belong to it. * [**Encapsulation**](https://www.webopedia.com/TERM/E/encapsulation.html)**:** The process of combining elements to create a new entity. A procedure is a type of encapsulation because it combines a series of computer instructions. * [**Information hiding**](https://www.webopedia.com/TERM/I/information_hiding.html)**:** The process of hiding details of an object or function. Information hiding is a powerful programming technique because it reduces complexity. * [**Inheritance**](https://www.webopedia.com/TERM/I/inheritance.html)**:** a feature that represents the "is a" relationship between different classes. * [**Interface**](https://www.webopedia.com/TERM/I/interface.html)**:** the languages and codes that the applications use to communicate with each other and with the hardware. * [**Messaging**](https://www.webopedia.com/TERM/M/message_passing.html)**:** Message passing is a form of communication used in parallel programming and object-oriented programming. * [**Object**](https://www.webopedia.com/TERM/O/object.html)**:** a self-contained entity that consists of both data and procedures to manipulate the data. * [**Polymorphism**](https://www.webopedia.com/TERM/P/polymorphism.html)**:** A programming language's ability to process objects differently depending on their data type or class. * [**Procedure**](https://www.webopedia.com/TERM/R/routine.html)**:** a section of a program that performs a specific task.   ***Advantages of Object Oriented Programming***  One of the principal advantages of object-oriented programzming techniques over procedural programming techniques is that they enable programmers to create [modules](https://www.webopedia.com/TERM/M/module.html) that do not need to be changed when a new type of object is added. A programmer can simply create a new object that inherits many of its [features](https://www.webopedia.com/TERM/F/feature.html) from existing objects. This makes object-oriented programs easier to modify.  ***OOPL - Object Oriented Programming Languages***  An ***o****bject-****o****riented****p****rogramming****l****anguage* (**OOPL**) is a high-level [programming language](https://www.webopedia.com/TERM/P/programming_language.html) based on the object-oriented model. To perform object-oriented programming, one needs an object-oriented programming language.  Many modern programming languages are object-oriented, however some older programming languages, such as [Pascal](https://www.webopedia.com/TERM/P/Pascal.html), do offer object-oriented versions. Examples of object-oriented programming languages include [Java](https://www.webopedia.com/TERM/J/Java.html), [C++](https://www.webopedia.com/TERM/C/C_plus_plus.html) and [Smalltalk](https://www.webopedia.com/TERM/S/Smalltalk.html).  ***The First OOPL***  Simula, developed in the 1960s at the Norwegian Computing Center in Oslo, is considered to be the first object-oriented programming language. Despite being first, [Smaslltalk](https://www.webopedia.com/TERM/S/Smalltalk.html) is considered to be the only true object-oriented programming environment and the one against which all others must be compared. It was first developed for educational use at Xerox Corporation's Palo Alto Research Center in the late 1960s and released in 1972. | |
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