**PROJECT REPORT ON**

***DIGITAL CLOCK USING PYTHON***

***JAWAHARLAL NEHRU NATIONAL COLLEGE OF ENGINNEERING,***

***SHIMOGA***

**MASTER OF COMPUTER APPLICATION**

**Submitted To**

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**AIM** : The aim of the project is to design a 12 hr Digital Clock that displays the time digitally in contrast to an Analog Clock. A Digital Clock to display time in hrs, min, secs can be constructed.

* This is a simple project to get started with Tkinter, which is a built-in package that comes with Python.
* Tkinter is basically a graphical user interface package.it has great features that can be used to create simple applications.

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**Python**

Python is a general-purpose programming language that is becoming ever more popular for analyzing data.

**Import Libraries**

We will use two libraries in this project. And both of them come with python, which means we don’t have to install them. These kind of libraries is called python built-in packages.

The main package we will use is Tkinter.

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| *from tkinter import \**  *from tkinter.ttk import \**  *from time import strftime* |

**The Label Design**

The cool step of the program is this one. Bcz you can put your own preferences into the design. This step will make your work different from others.

There are four elements that we will customize:

* The font of the digital numbers.
* The background color of our digital clock.

|  |
| --- |
| *font=(“ds-digital”,80)*  *background=”black”*  *foreground=”cyan”* |

* Lets, combine the elements and define our label. Label function is the text that will show our time.

|  |
| --- |
| *label=Label(root,font=(“dsdigital”,80)background=”black”,*  *foreground=”cyan”)* |

**Digital Clock Function**

If we are working on an application project, functions are the best way to make things work. Functions are also great bcz they make the program more structured and easier to understand. Lets, define our digital clock function then:

|  |
| --- |
| *def time():*  *string=strftime(‘%H:%M:%S %p’)*  *label.config(text=string)*  *label.after(1000,time)* |

**Understanding the code:**

* In the first line, we are getting real-time using the time package. And we are also defining the format that we want it to be.
* In the second line, we are just assigning the real-time to the label method. This way the digital time will be updated.
* And lastly, we are calling the function again so that the digital clock is showing the live time.this way every 1000 ms the time is getting updated. In programming, this is called a recursion loop.

**Run the application**

Functions will not run unless you call them. To trigger the application, we will call the function.

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| --- |
| *time()*  *mainloop()* |

