PYTHON PROJECT

- **PROJECT NAME : YOUTUBE DOWNLOADER**

- **SUBMITTING TO :**

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   Eisystems Services

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   Trainer , Data Science & Analytics Domain,
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Batch: 21PYTH-032

CONTENT TABLE

List of Figures

Abstract of Project

Project Title : Youtube Downloader

The Youtube downloader project is a python project. The object of this project is to download any type of video in a fast and easy way from youtube in your device.

In this python project, user has to copy the youtube video URL that they want to download and simply paste that URL in the 'paste link here' section and user can also change the type of video quality (i.e., 144p, 360p, 720p and 1080p) by typing these video quality in its respective section.User can also change the download directory.

Now,click on the download button, it will start downloading the video. When video downloading finishes, it shows a message 'downloaded' popup on the window below the download button.

PROJECT SUMMARY

Project Title: YouTube Downloader

In recent times, the numbers of internet users are increasing day by day. It contains those that utilize the internet for research purposes, social networking purposes, and leisure purposes such as watching videos online. Nowadays, one of the most visited and leading sites is YouTube. This website is recognized to be the storage of videos from across the globe. In order to view all these online videos in the computer simply without having to visit the website utilizing the internet making the audio or video tips accessible anytime when one desires to.

There are several advantages of Youtube Downloader:

- It maximizes bandwidth accessible and minimizes YouTube's speed throttling
- Support for almost any quality or format available from Youtube
- File management
- It is easy to download.

Objectives Of Project

- Youtube Downloader is a program which help us to download video in a easy way.
- Youtube Downloader can also be use to download only audia (i.e., MP3).
- We can also change the output directory.
- Youtube Downloader can also provide to download a video in higher quality.
- Youtube Downloader is easy to use . A video can be download just by a single click.
- Youtube Downloader also has its own GUI.

Details of Project Developed

- In this software we need to copy the Uniform Resource Locator of a that video we want to download.
- It is easy to use because it has simple Graphical User Interface.
- There are ten steps to design a Youtube Downloader Project. They are scope & requirment,importing the necessary liabraries, Identify the input, understand UI elements,testing.
- The first step to designing a Youtube Downloader is to know the scope and requirements and its limitations.
- The second step is to import various liabraries such as, tkinter, pytube,time etc.
- The third step is to identify the inputs from users in the form of string and provide it into its respective Entry box.
- The fourth step is to understand the UI elements.
- UI elements are of five types: Command Line (CL), Graphical User Interface (GUI), Menu-Driven Interface (MDI), Form Based Interface (FBI), and Natural Language Interface (NLI).
- The final step of Youtube Downloader Programe is testing, which is done in your device and websites to know how it’s working.

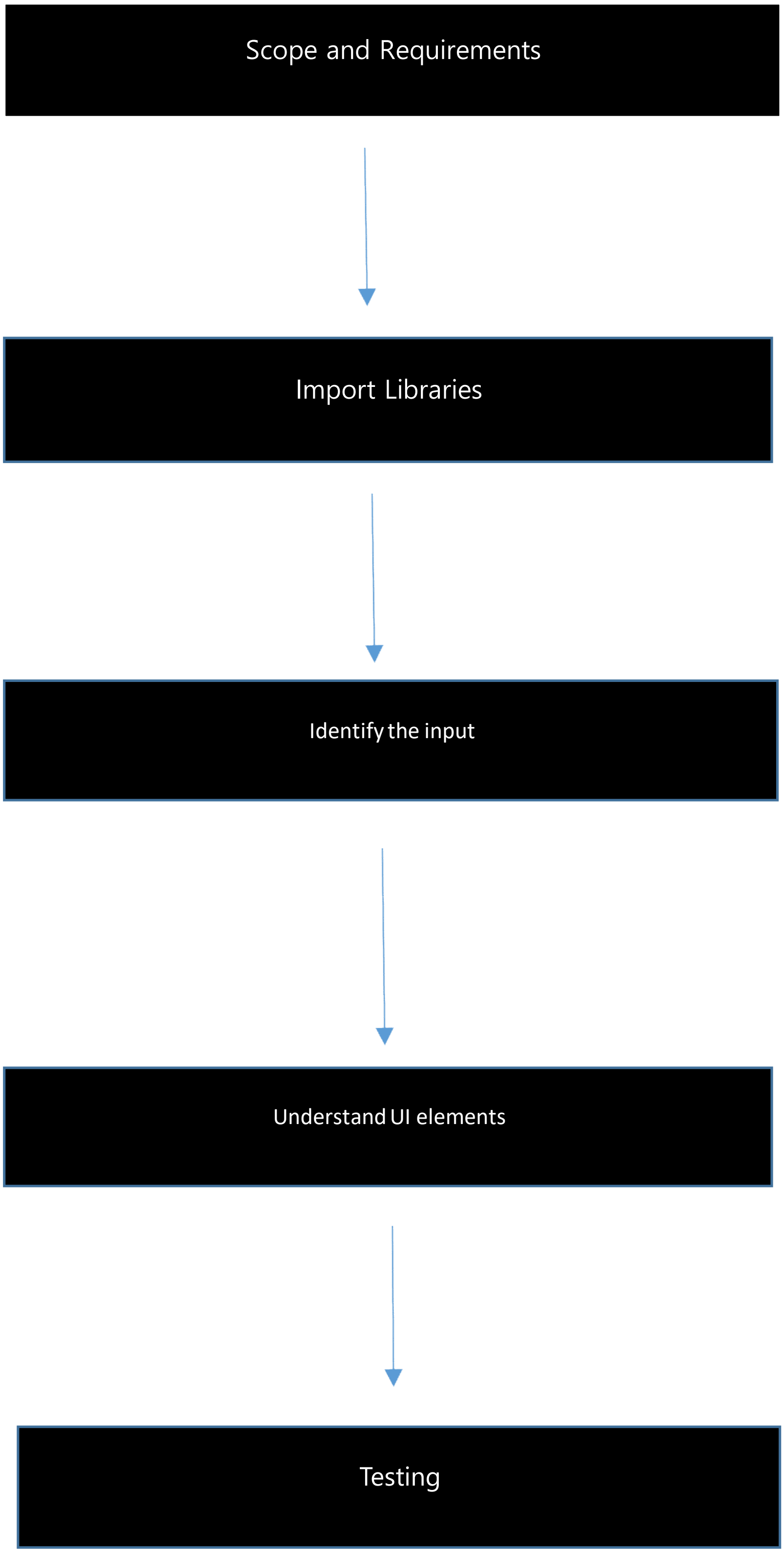
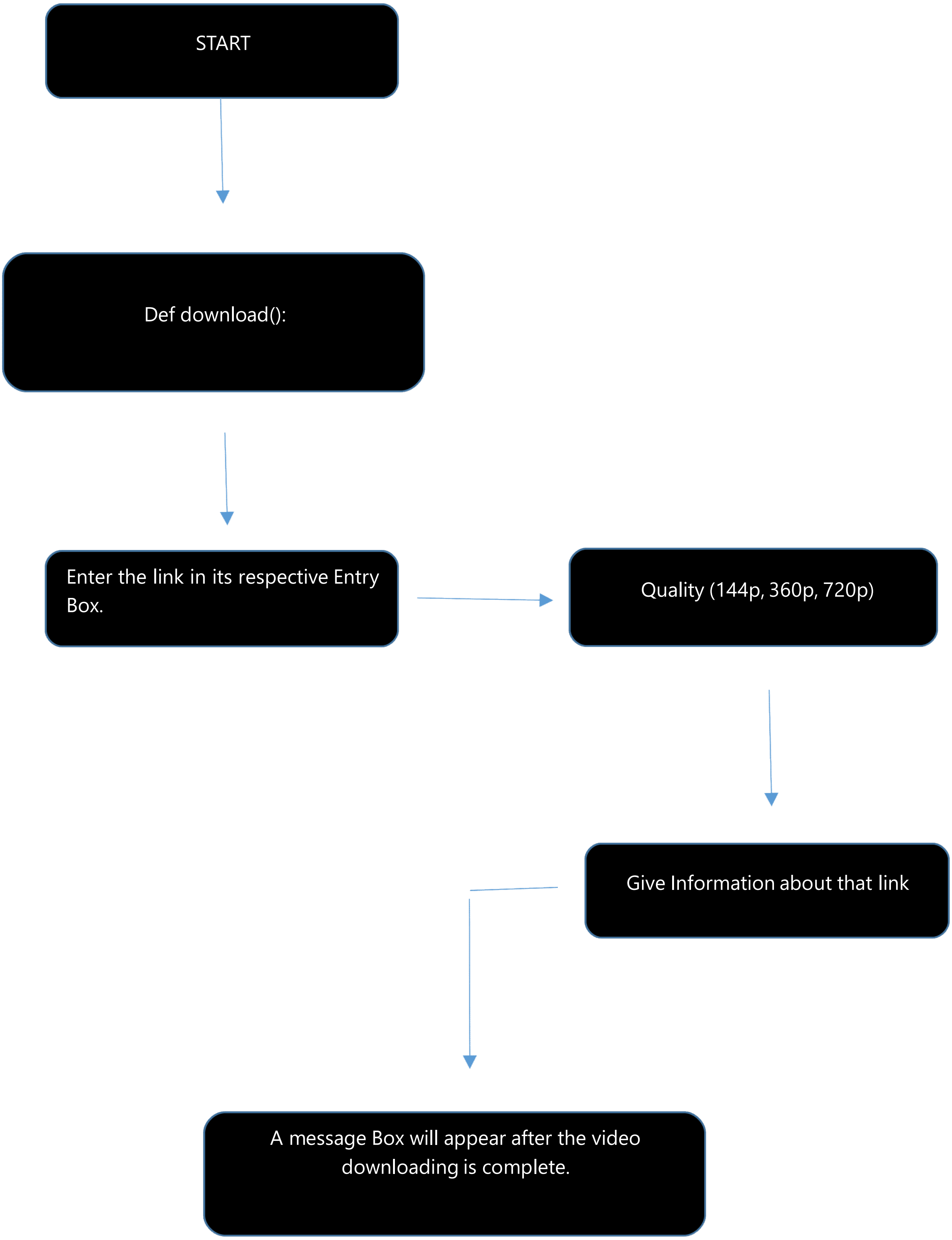


Fig. Details of Project Developed

System Requirement Used

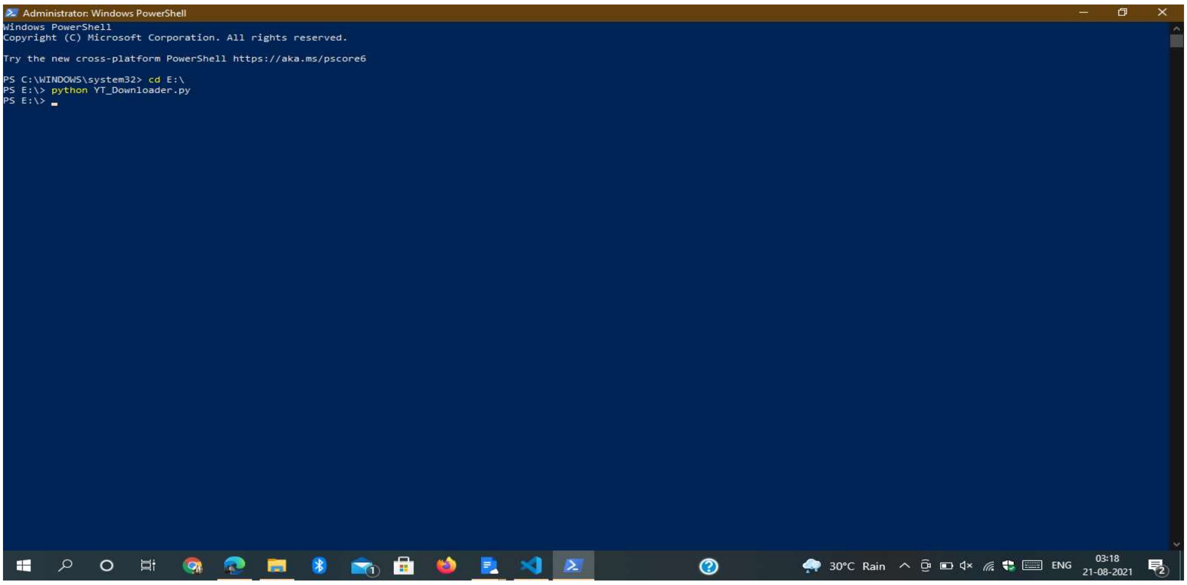
1. Windows 10 pro
2. Python 3.9.6
3. Visual Studio Code IDE
4. Command prompt

Data flow Diagram / Algorithm


START
Def download():
Enter the link in its respective Entry Box.
Quality (144p, 360p, 720p)
Give Information about that link
A message Box will appear after the video downloading is complete.

Input Output Datasets / Screenshots

1. Open Youtube Video Downloader.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
PS E:\> _
```
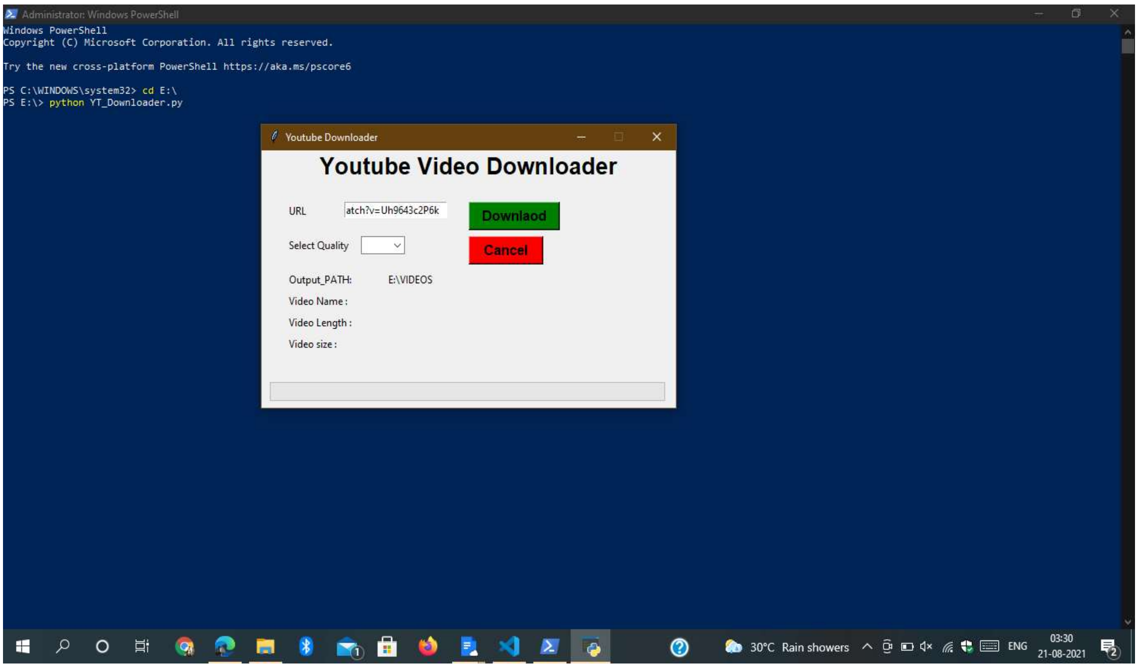

2. Paste a URL link of a video from Youtube.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
```

Youtube Video Downloader

URL: atch?v=Uh9643c2P6k

Select Quality

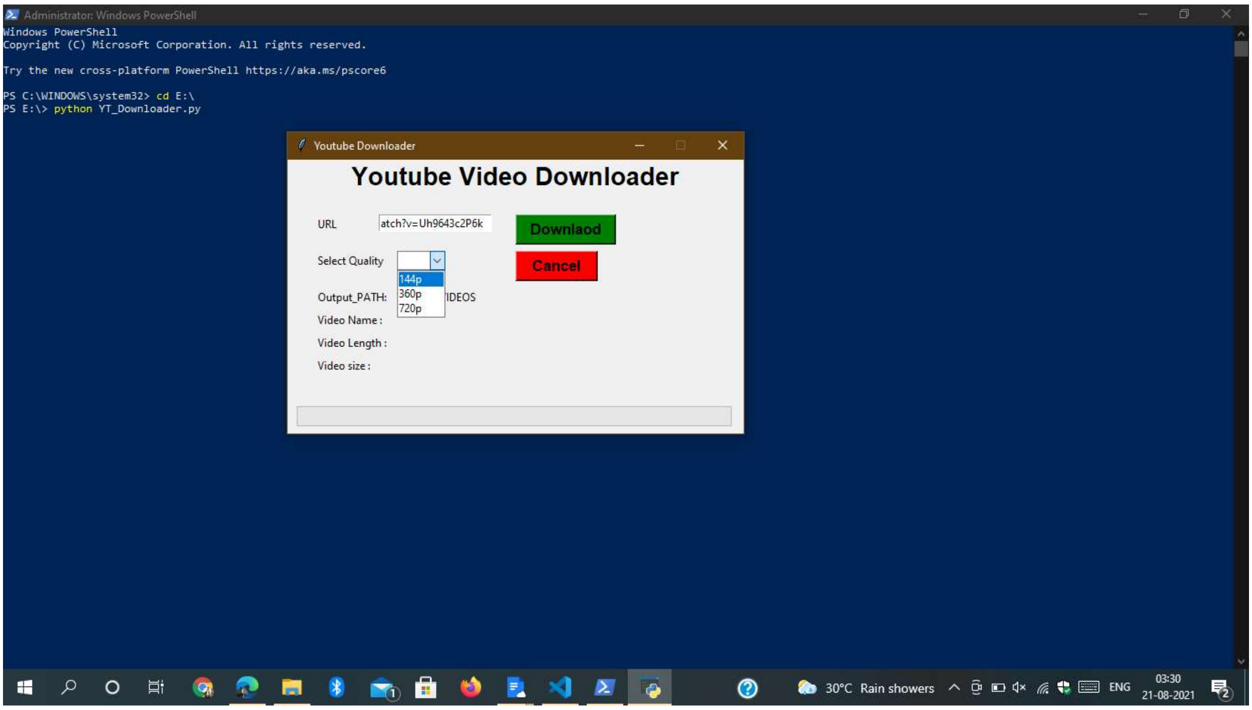
Output_PATH: E:\VIDEOS

Video Name :

Video Length :

Video size :

3. Select a quality (144p, 720p, 1080p).



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
```
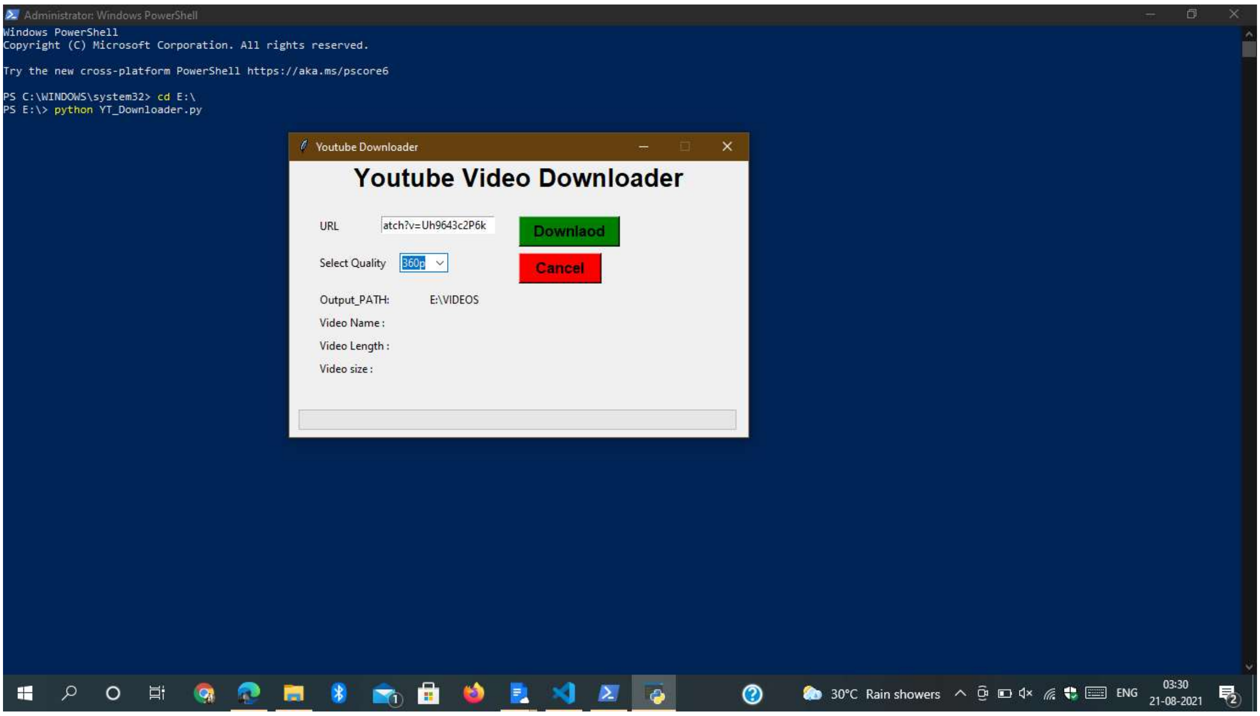

URL: atch?v=Uh9643c2P6k

Select Quality:



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
```
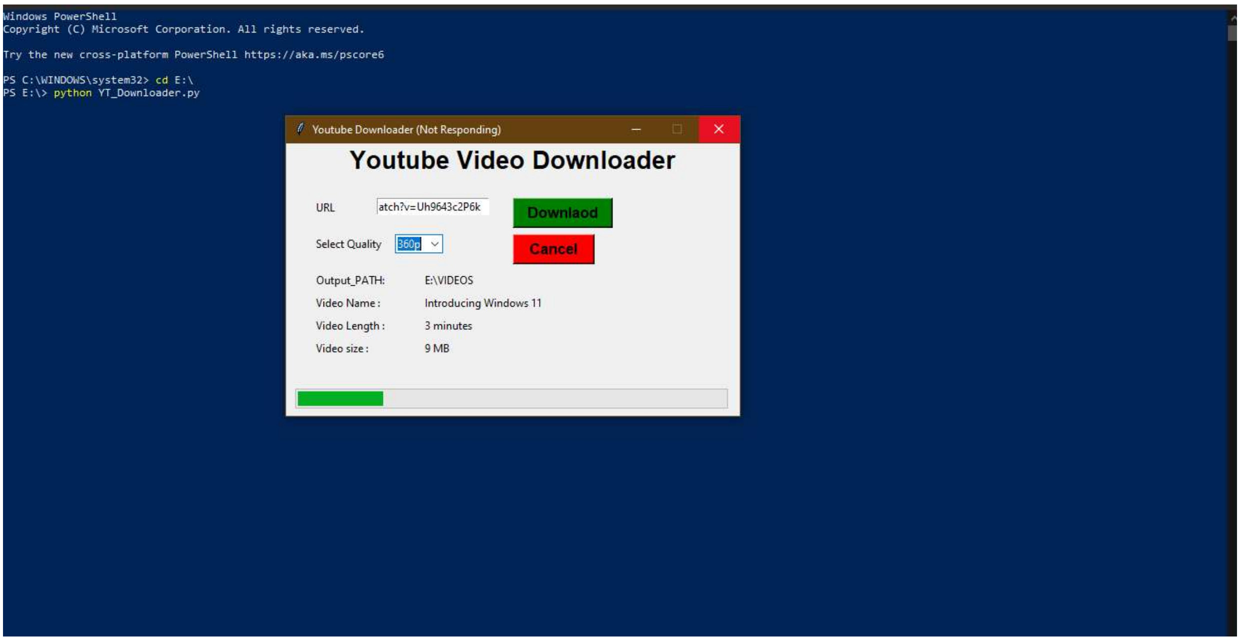

URL: atch?v=Uh9643c2P6k

Select Quality: 360p

Output_PATH: E:\VIDEOS

4. Start Downloading.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
```

Youtube Video Downloader

URL atch?v=Uh9643c2P6k

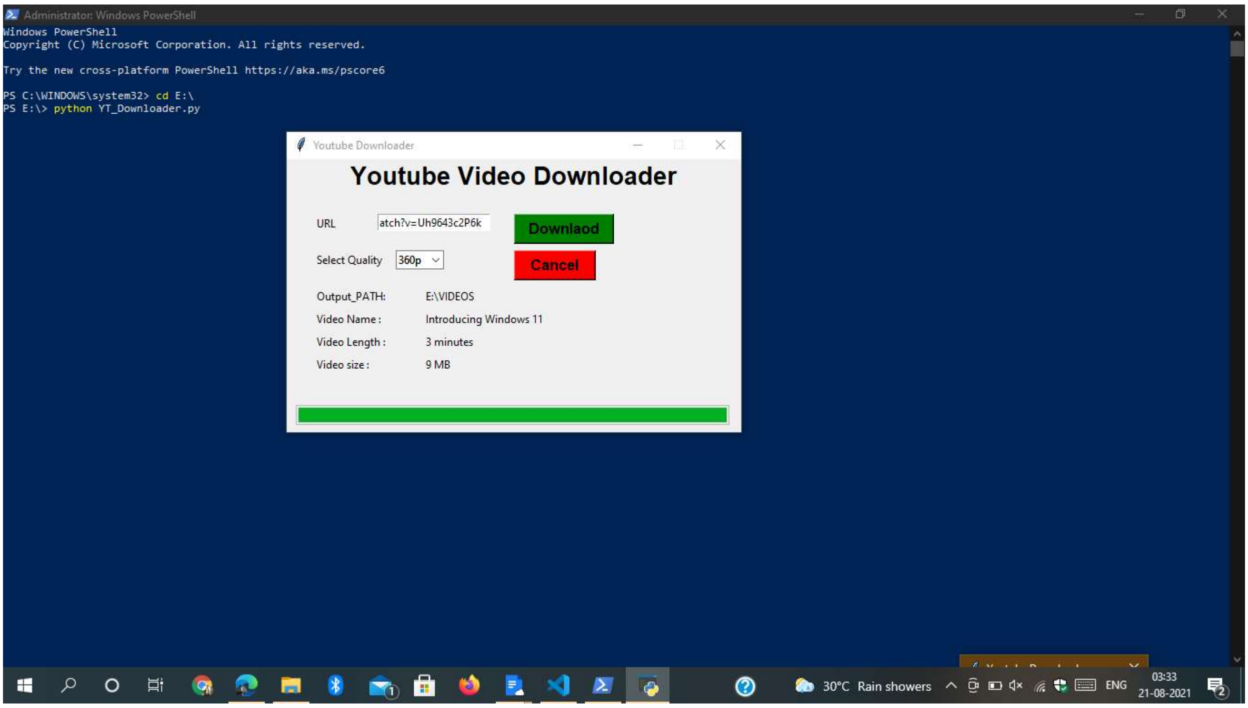
Select Quality 360p

Output_PATH: E:\VIDEOS

Video Name : Introducing Windows 11

Video Length : 3 minutes

Video size : 9 MB



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
```

Youtube Video Downloader

URL atch?v=Uh9643c2P6k

Select Quality 360p

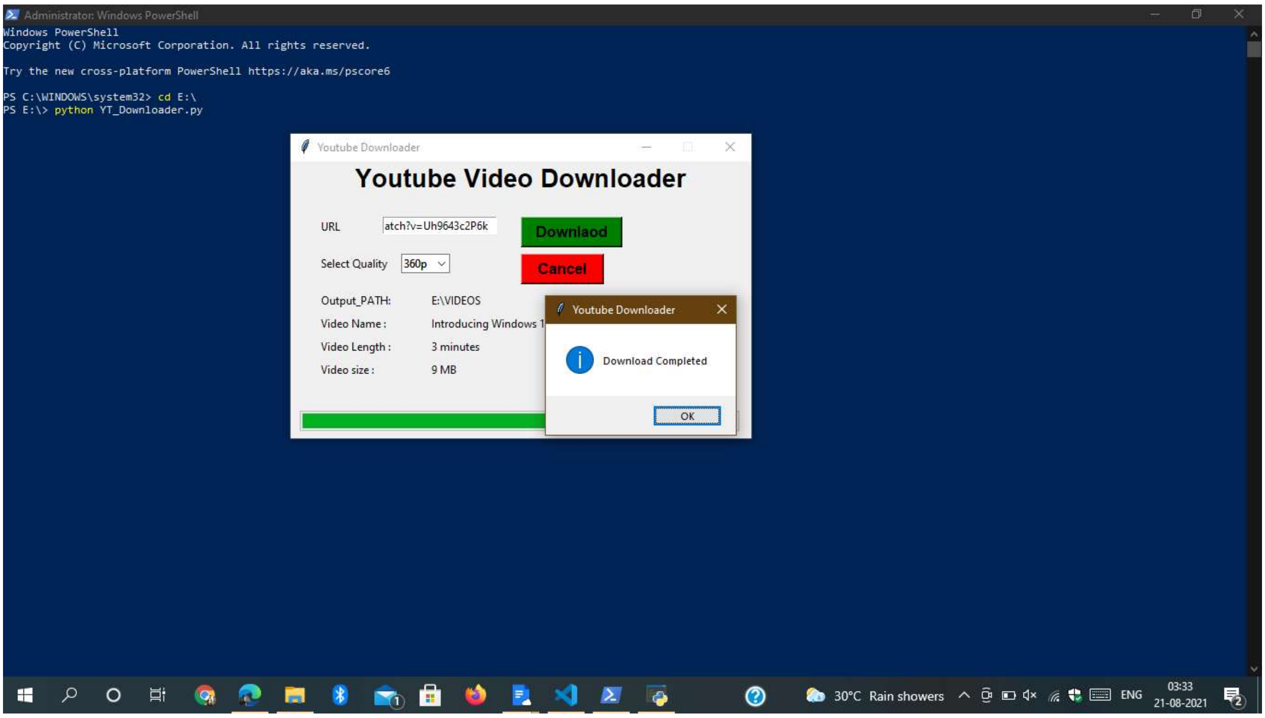
Output_PATH: E:\VIDEOS

Video Name : Introducing Windows 11

Video Length : 3 minutes

Video size : 9 MB

5. Download Completed Message.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
```

Youtube Video Downloader

URL: atch?v=Uh9643c2P6k

Select Quality: 360p

Output_PATH: E:\VIDEOS

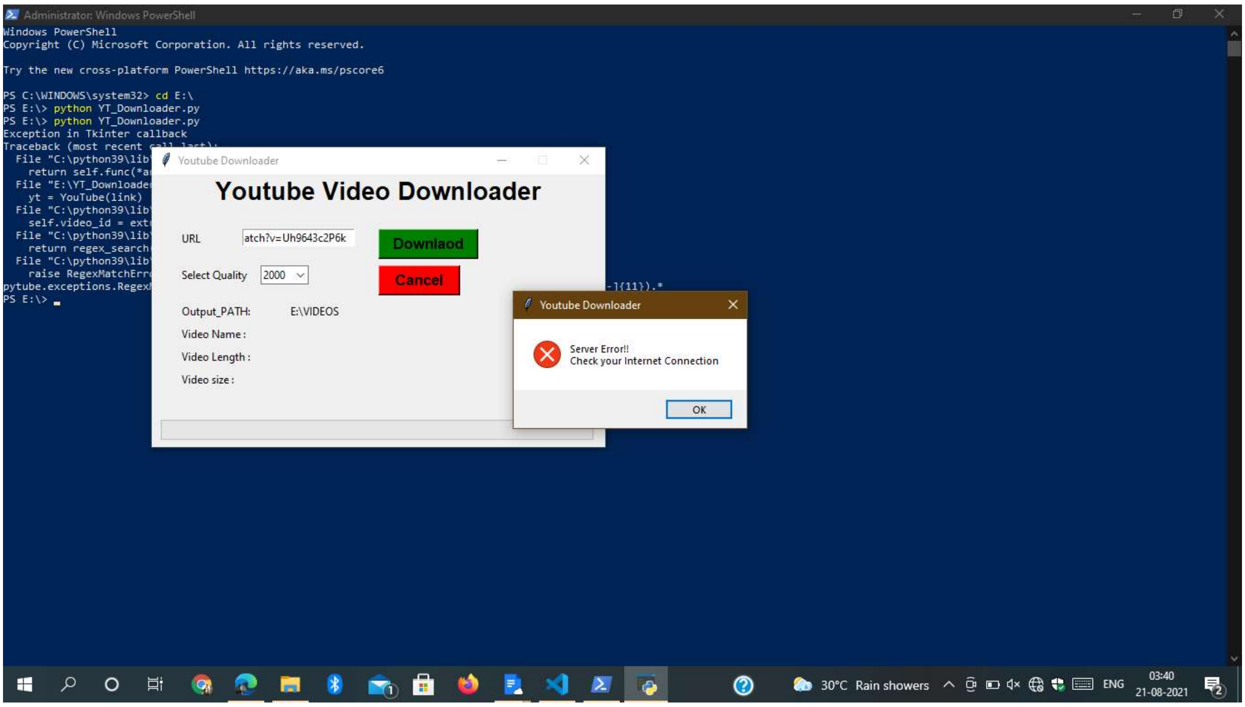
Video Name : Introducing Windows 1

Video Length : 3 minutes

Video size : 9 MB

Youtube Downloader: Download Completed

6. Internet Break Message.



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd E:\
PS E:\> python YT_Downloader.py
PS E:\> python YT_Downloader.py
Exception in Tkinter callback
Traceback (most recent call last):
  File "C:\python39\lib
    return self.func(*a
  File "E:\YT_Downloade
    yt = YouTube(link)
  File "C:\python39\lib
    self.video_id = ext
  File "C:\python39\lib
    return regex_search
  File "C:\python39\lib
    raise RegexMatchErr
pytube.exceptions.Regex                                          -]{11}).*
PS E:\> _
```

Youtube Video Downloader

URL: atch?v=Uh9643c2P6k

Select Quality: 2000

Output_PATH: E:\VIDEOS

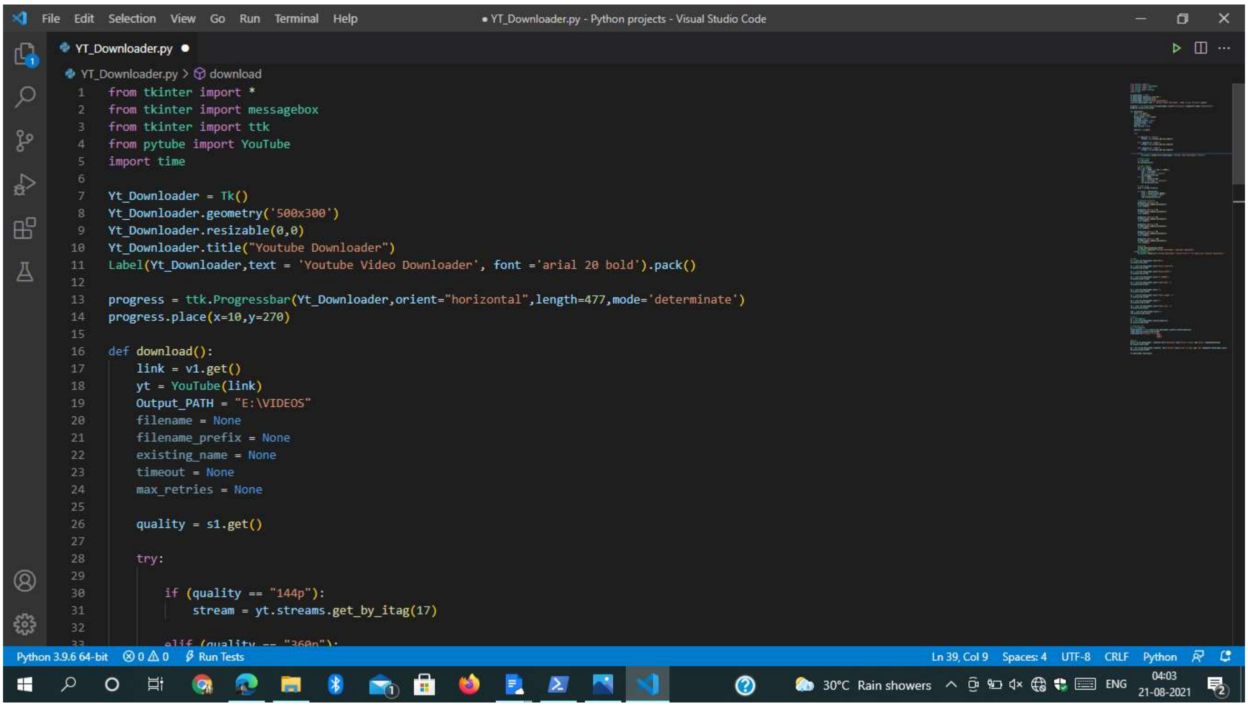
Video Name :

Video Length :

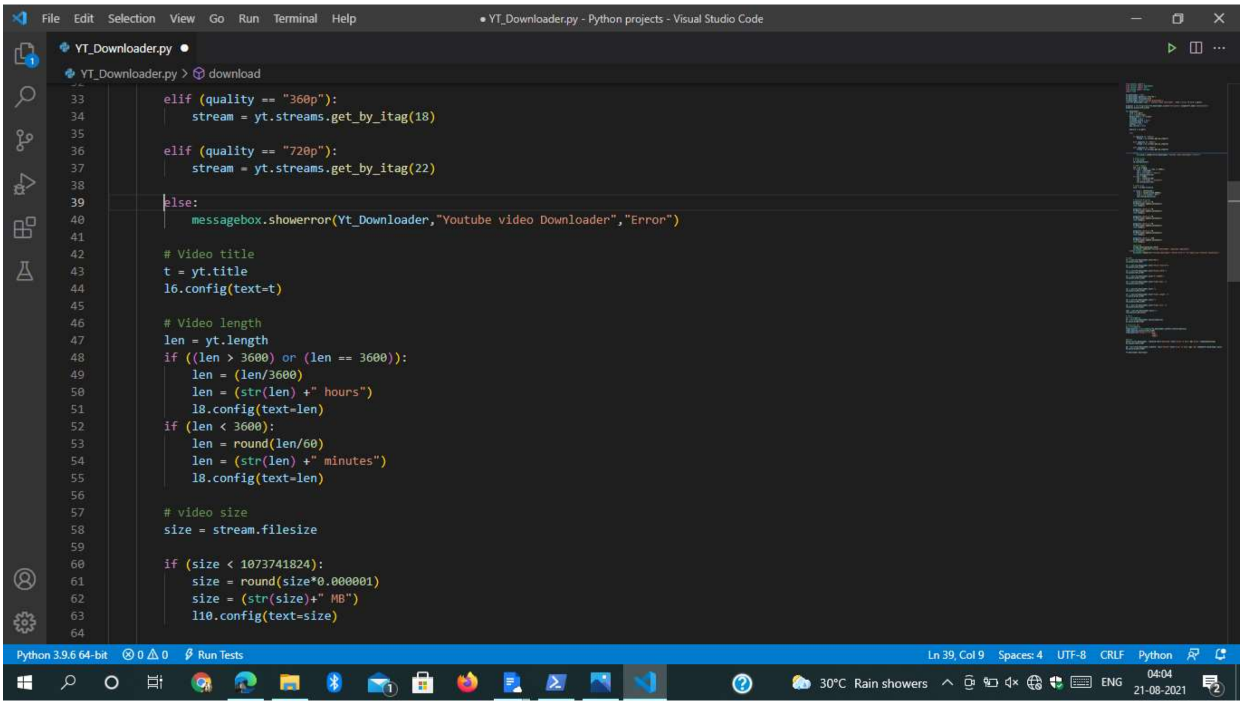
Video size :

Youtube Downloader: Server Error!! Check your Internet Connection

TEXT CODE


File Edit Selection View Go Run Terminal Help
• YT_Downloader.py - Python projects - Visual Studio Code
YT_Downloader.py ●
YT_Downloader.py > download
Python 3.9.6 64-bit ⊗ 0 ⚠ 0 Run Tests
Ln 39, Col 9 Spaces: 4 UTF-8 CRLF Python
30°C Rain showers ENG 04:03 21-08-2021

```
from tkinter import *
from tkinter import messagebox
from tkinter import ttk
from pytube import YouTube
import time

Yt_Downloader = Tk()
Yt_Downloader.geometry('500x300')
Yt_Downloader.resizable(0,0)
Yt_Downloader.title("Youtube Downloader")
Label(Yt_Downloader,text = 'Youtube Video Downloader', font ='arial 20 bold').pack()

progress = ttk.Progressbar(Yt_Downloader,orient="horizontal",length=477,mode='determinate')
progress.place(x=10,y=270)

def download():
    link = v1.get()
    yt = YouTube(link)
    Output_PATH = "E:\VIDEOS"
    filename = None
    filename_prefix = None
    existing_name = None
    timeout = None
    max_retries = None

    quality = s1.get()

    try:

        if (quality == "144p"):
            stream = yt.streams.get_by_itag(17)

        elif (quality == "360p"):
```


File Edit Selection View Go Run Terminal Help
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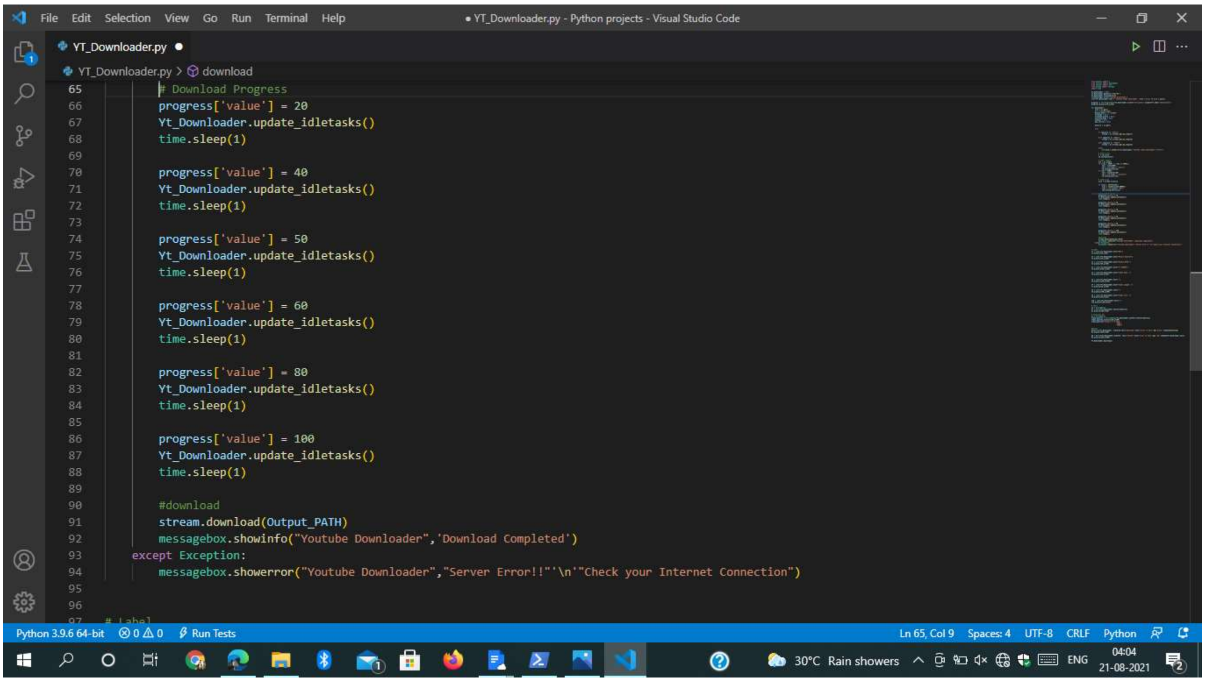
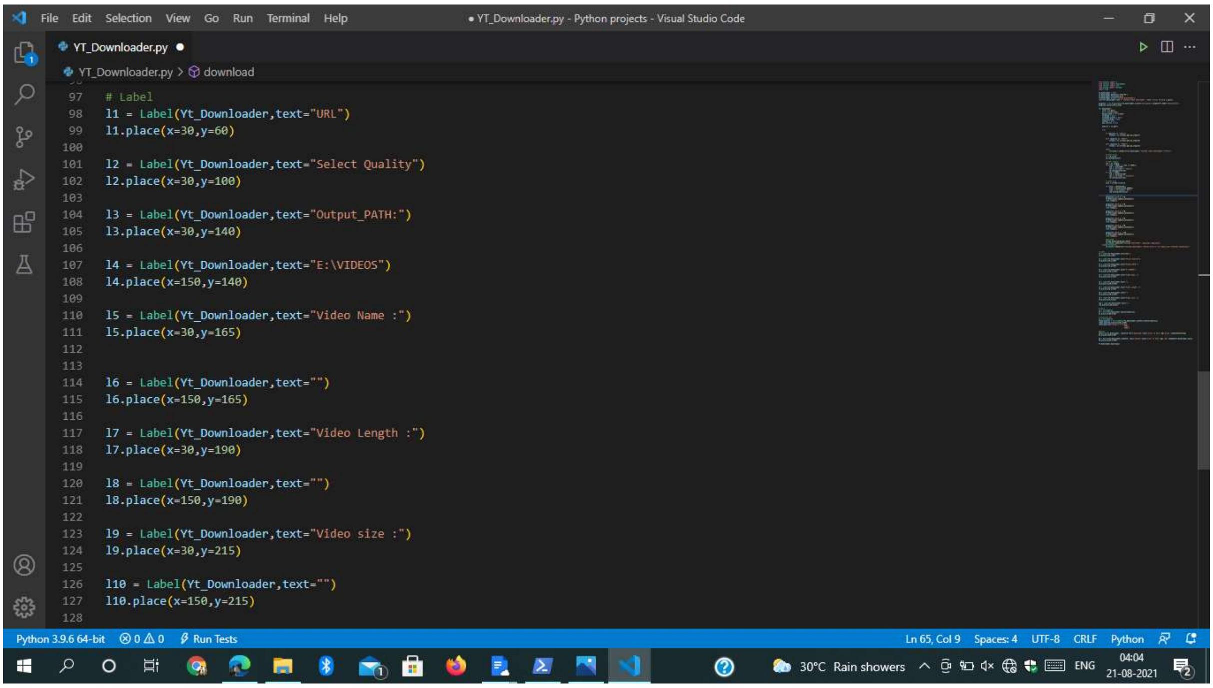
YT_Downloader.py ●
YT_Downloader.py > download
Python 3.9.6 64-bit ⊗ 0 ⚠ 0 Run Tests
Ln 39, Col 9 Spaces: 4 UTF-8 CRLF Python
30°C Rain showers ENG 04:04 21-08-2021

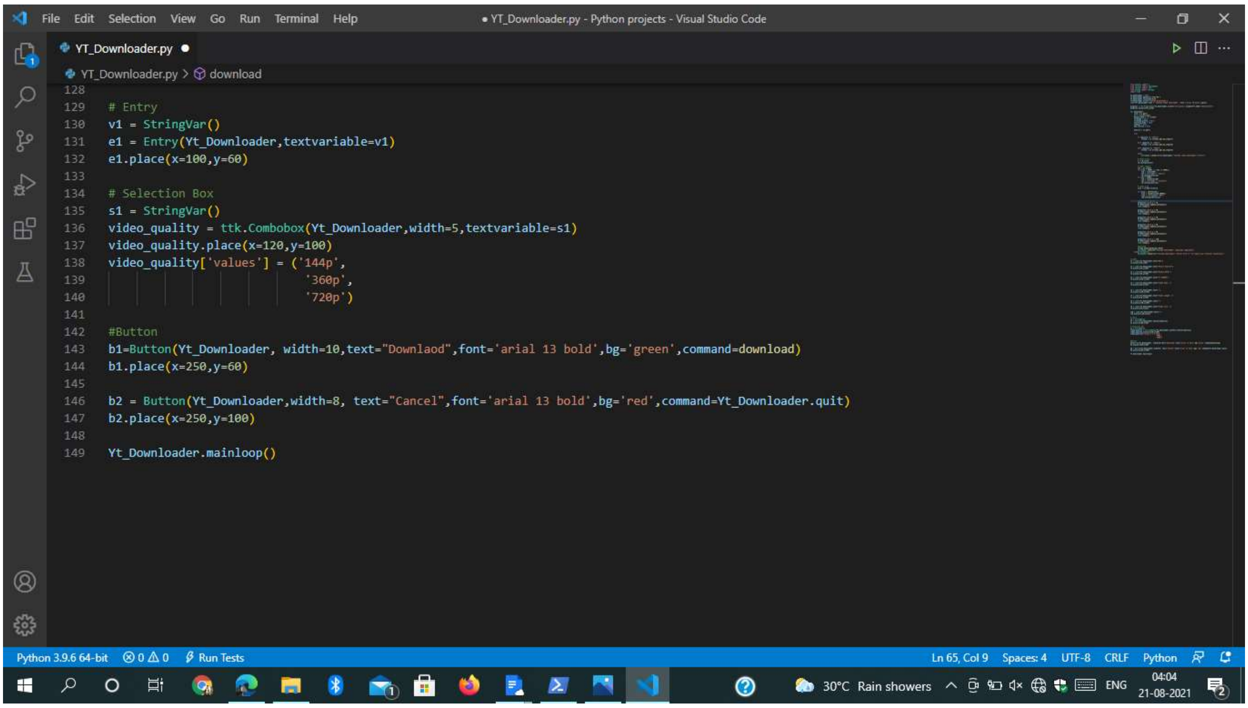
```
        elif (quality == "360p"):
            stream = yt.streams.get_by_itag(18)

        elif (quality == "720p"):
            stream = yt.streams.get_by_itag(22)

        else:
            messagebox.showerror(Yt_Downloader,"Youtube video Downloader","Error")

        # Video title
        t = yt.title
        l6.config(text=t)

        # Video length
        len = yt.length
        if ((len > 3600) or (len == 3600)):
            len = (len/3600)
            len = (str(len) +" hours")
            l8.config(text=len)
        if (len < 3600):
            len = round(len/60)
            len = (str(len) +" minutes")
            l8.config(text=len)

        # video size
        size = stream.filesize

        if (size < 1073741824):
            size = round(size*0.000001)
            size = (str(size)+" MB")
            l10.config(text=size)

```


File Edit Selection View Go Run Terminal Help
• YT_Downloader.py - Python projects - Visual Studio Code
YT_Downloader.py
YT_Downloader.py > download
Python 3.9.6 64-bit ⊗ 0 ⚠ 0 Run Tests
Ln 65, Col 9 Spaces: 4 UTF-8 CRLF Python
30°C Rain showers ENG 04:04 21-08-2021

```
        # Download Progress
        progress['value'] = 20
        Yt_Downloader.update_idletasks()
        time.sleep(1)

        progress['value'] = 40
        Yt_Downloader.update_idletasks()
        time.sleep(1)

        progress['value'] = 50
        Yt_Downloader.update_idletasks()
        time.sleep(1)

        progress['value'] = 60
        Yt_Downloader.update_idletasks()
        time.sleep(1)

        progress['value'] = 80
        Yt_Downloader.update_idletasks()
        time.sleep(1)

        progress['value'] = 100
        Yt_Downloader.update_idletasks()
        time.sleep(1)

        #download
        stream.download(Output_PATH)
        messagebox.showinfo("Youtube Downloader",'Download Completed')
    except Exception:
        messagebox.showerror("Youtube Downloader","Server Error!!"'\n'"Check your Internet Connection")
```


File Edit Selection View Go Run Terminal Help
• YT_Downloader.py - Python projects - Visual Studio Code
YT_Downloader.py
YT_Downloader.py > download
Python 3.9.6 64-bit ⊗ 0 ⚠ 0 Run Tests
Ln 65, Col 9 Spaces: 4 UTF-8 CRLF Python
30°C Rain showers ENG 04:04 21-08-2021

```
# Label
l1 = Label(Yt_Downloader,text="URL")
l1.place(x=30,y=60)

l2 = Label(Yt_Downloader,text="Select Quality")
l2.place(x=30,y=100)

l3 = Label(Yt_Downloader,text="Output_PATH:")
l3.place(x=30,y=140)

l4 = Label(Yt_Downloader,text="E:\VIDEOS")
l4.place(x=150,y=140)

l5 = Label(Yt_Downloader,text="Video Name :")
l5.place(x=30,y=165)


l6 = Label(Yt_Downloader,text="")
l6.place(x=150,y=165)

l7 = Label(Yt_Downloader,text="Video Length :")
l7.place(x=30,y=190)

l8 = Label(Yt_Downloader,text="")
l8.place(x=150,y=190)

l9 = Label(Yt_Downloader,text="Video size :")
l9.place(x=30,y=215)

l10 = Label(Yt_Downloader,text="")
l10.place(x=150,y=215)
```



```python

# Entry
v1 = StringVar()
e1 = Entry(Yt_Downloader,textvariable=v1)
e1.place(x=100,y=60)

# Selection Box
s1 = StringVar()
video_quality = ttk.Combobox(Yt_Downloader,width=5,textvariable=s1)
video_quality.place(x=120,y=100)
video_quality['values'] = ('144p',
                           '360p',
                           '720p')

#Button
b1=Button(Yt_Downloader, width=10,text="Downlaod",font='arial 13 bold',bg='green',command=download)
b1.place(x=250,y=60)

b2 = Button(Yt_Downloader,width=8, text="Cancel",font='arial 13 bold',bg='red',command=Yt_Downloader.quit)
b2.place(x=250,y=100)

Yt_Downloader.mainloop()
```

References:

- Google (www.google.co.in)
- Youtube (www.youtube.com)
- PyPI · The Python Package Index (www..pypi.org)