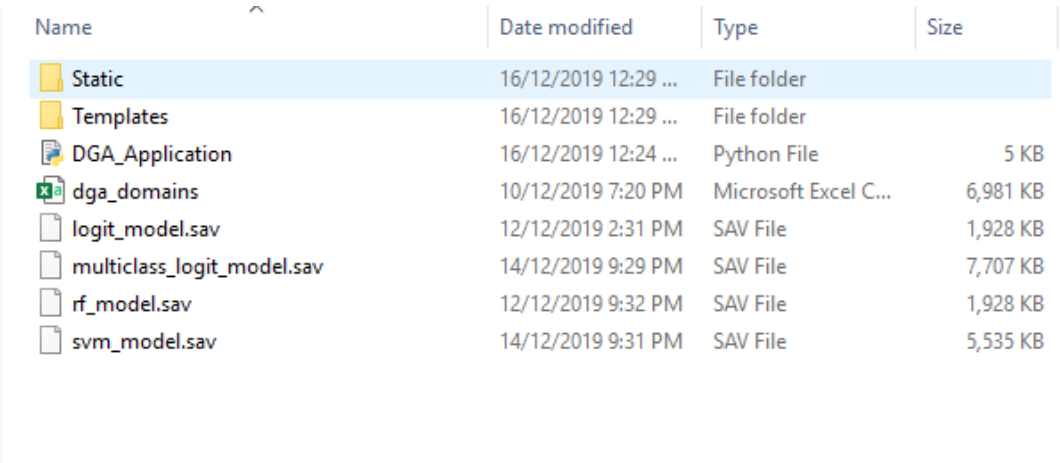
Steps to run the DGA application:

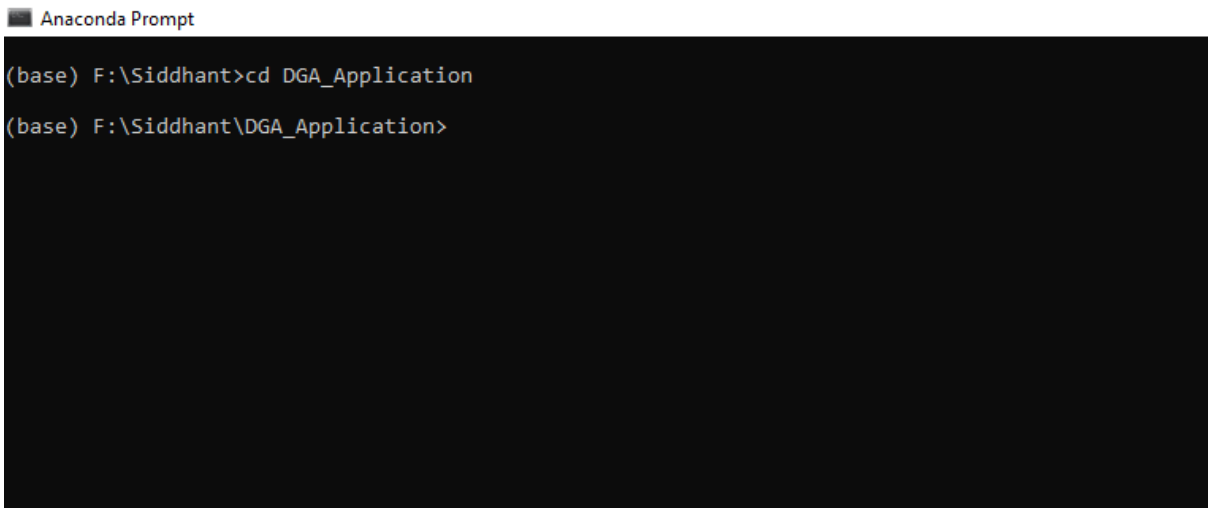
1. Please find the DGA application folder with the following files present in it.



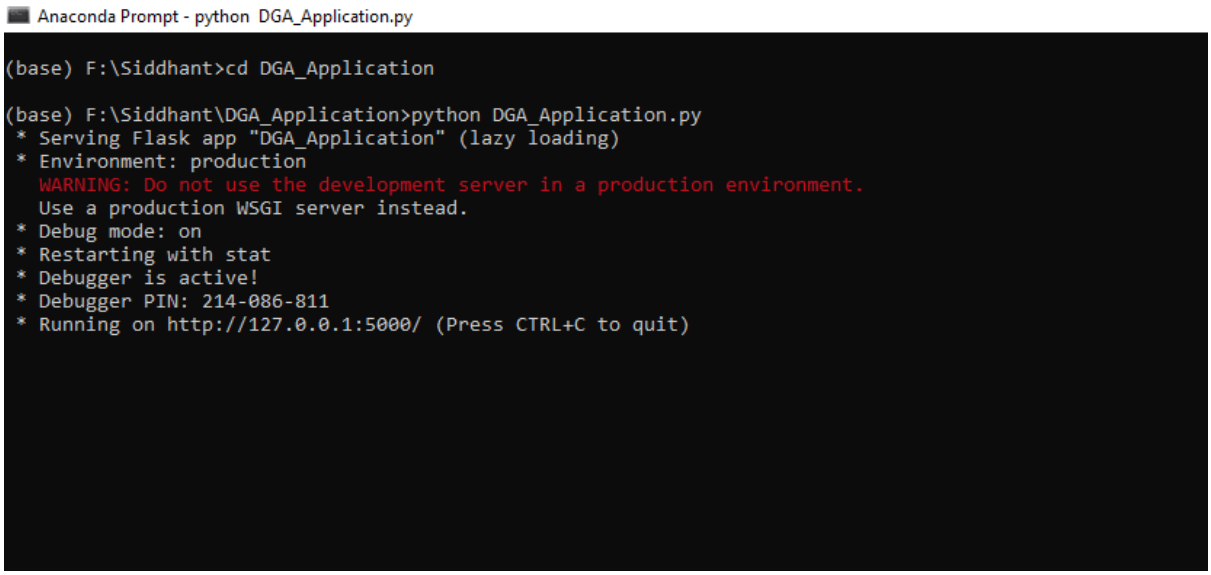
Name	Date modified	Type	Size
Static	16/12/2019 12:29 ...	File folder	
Templates	16/12/2019 12:29 ...	File folder	
DGA_Application	16/12/2019 12:24 ...	Python File	5 KB
dga_domains	10/12/2019 7:20 PM	Microsoft Excel C...	6,981 KB
logit_model.sav	12/12/2019 2:31 PM	SAV File	1,928 KB
multiclass_logit_model.sav	14/12/2019 9:29 PM	SAV File	7,707 KB
rf_model.sav	12/12/2019 9:32 PM	SAV File	1,928 KB
svm_model.sav	14/12/2019 9:31 PM	SAV File	5,535 KB

   a. The *Static* folder contains the *CSS* file of the web application.
   b. The *Templates* folder contains 2 *HTML* files including *home.html* and *subclass.html*
   c. The *DGA_Application.py* is the main executable application file.
   d. The *dga_domains.csv* is the original data file.
   e. Rest *.sav* files are the trained machine learning models. Models used in the application are *logit_model.sav* and *multiclass_logit_model.sav*

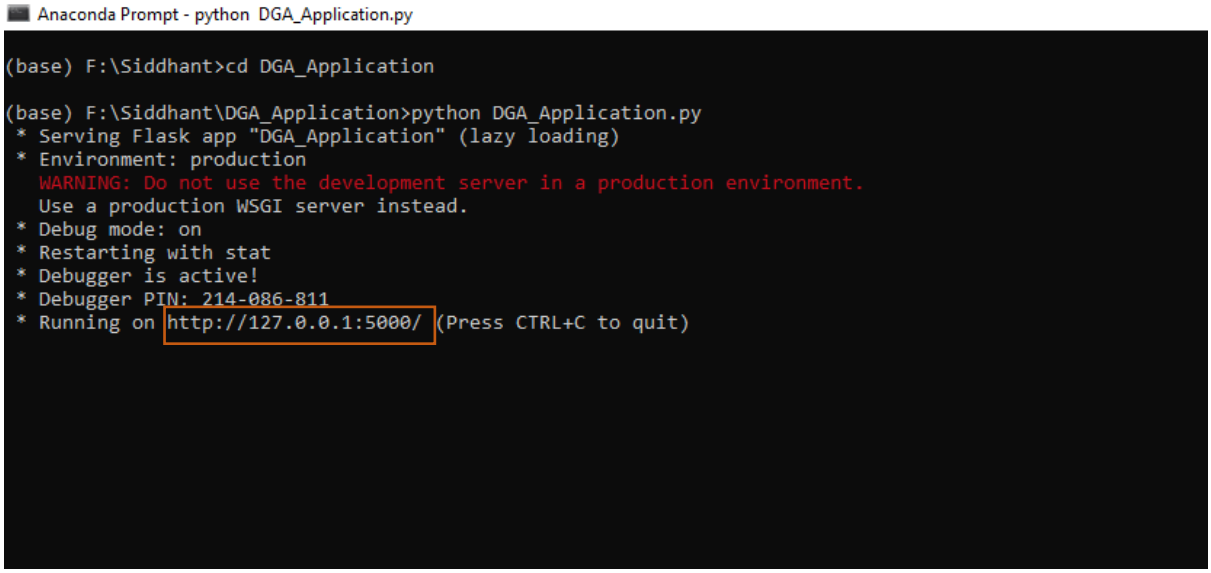
2. Open the Anaconda Command Prompt. Change the base directory to the folder in which your application file is present.



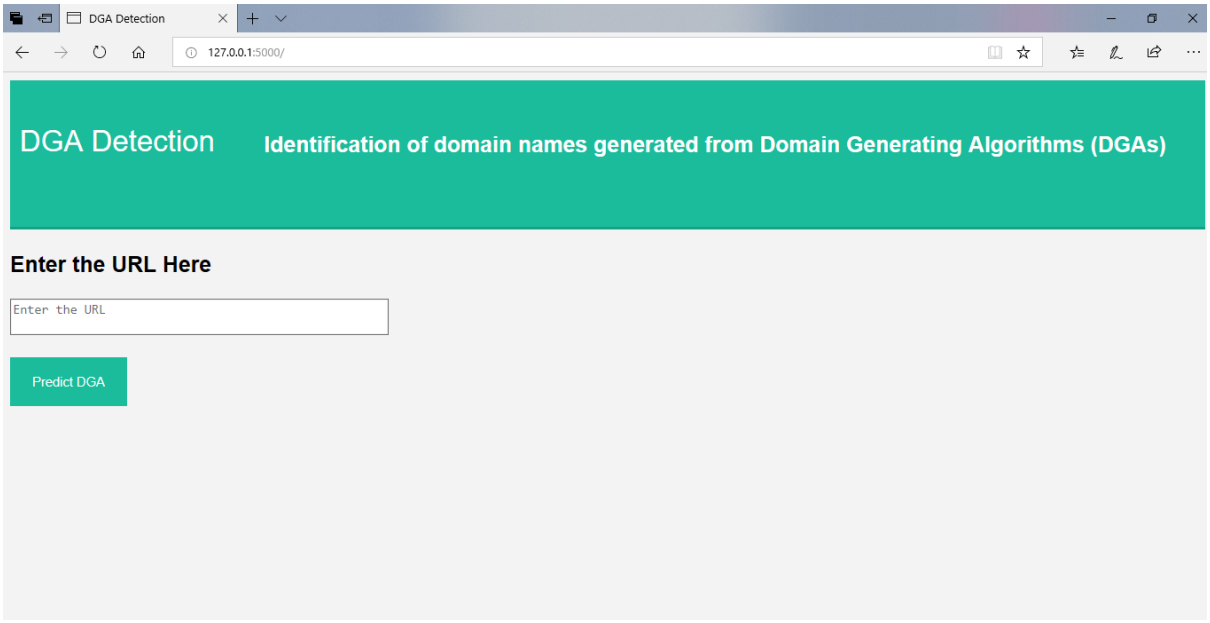
3. Run the *DGA_Application.py* file. Follow the syntax in the snapshot below.



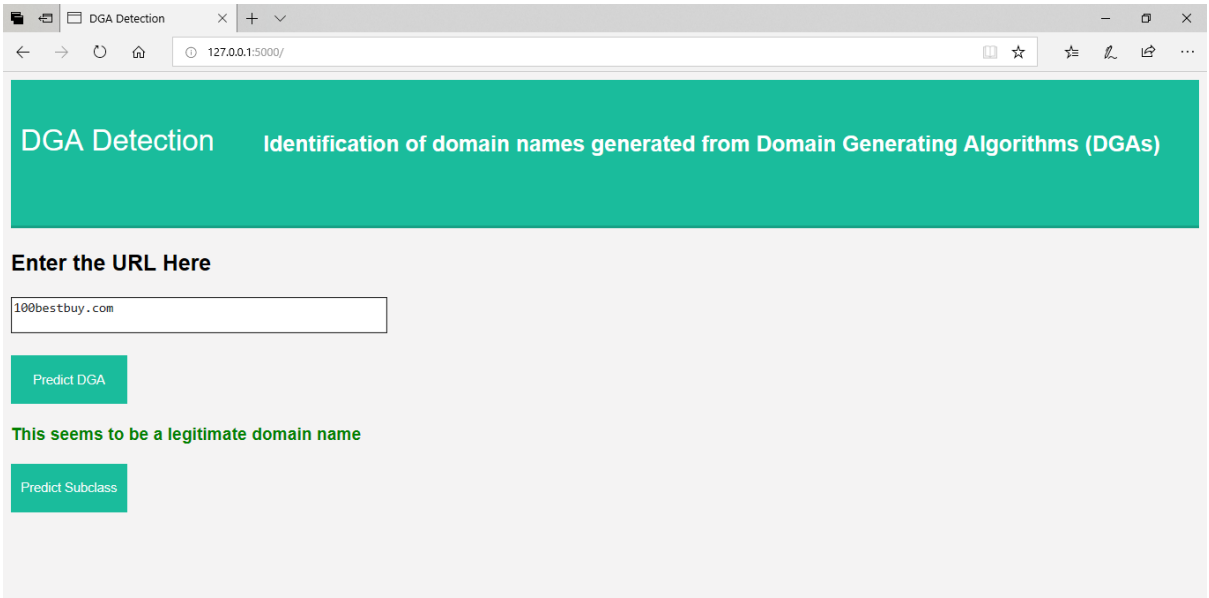
4. To open this web application in the browser, copy the address highlighted in the snapshot below and paste it in the address bar of a browser.

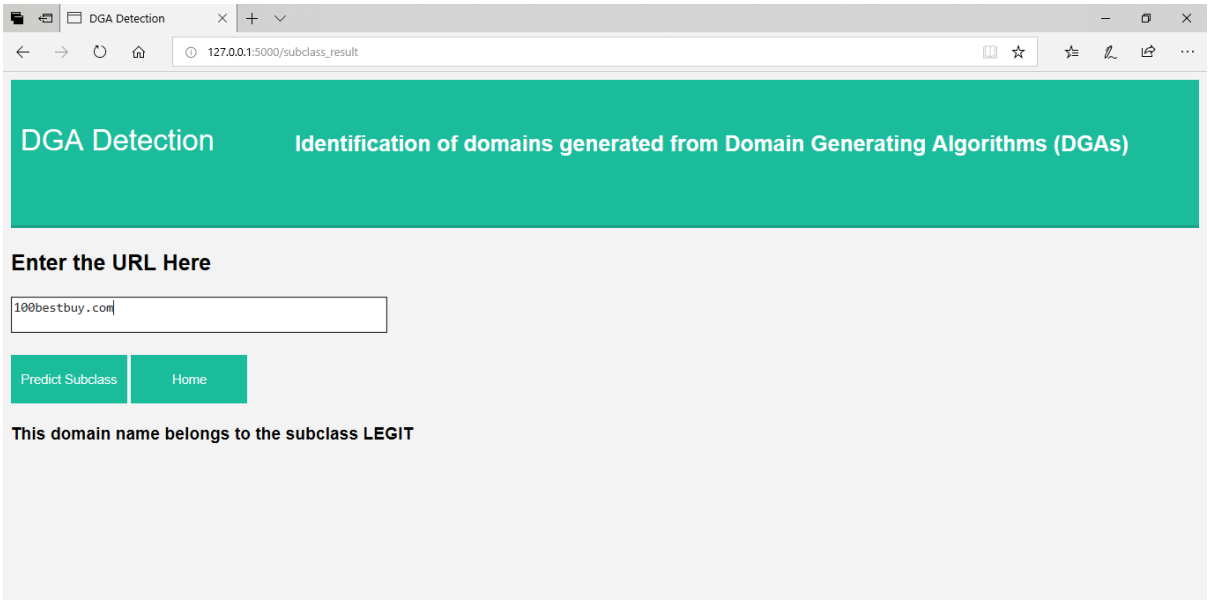


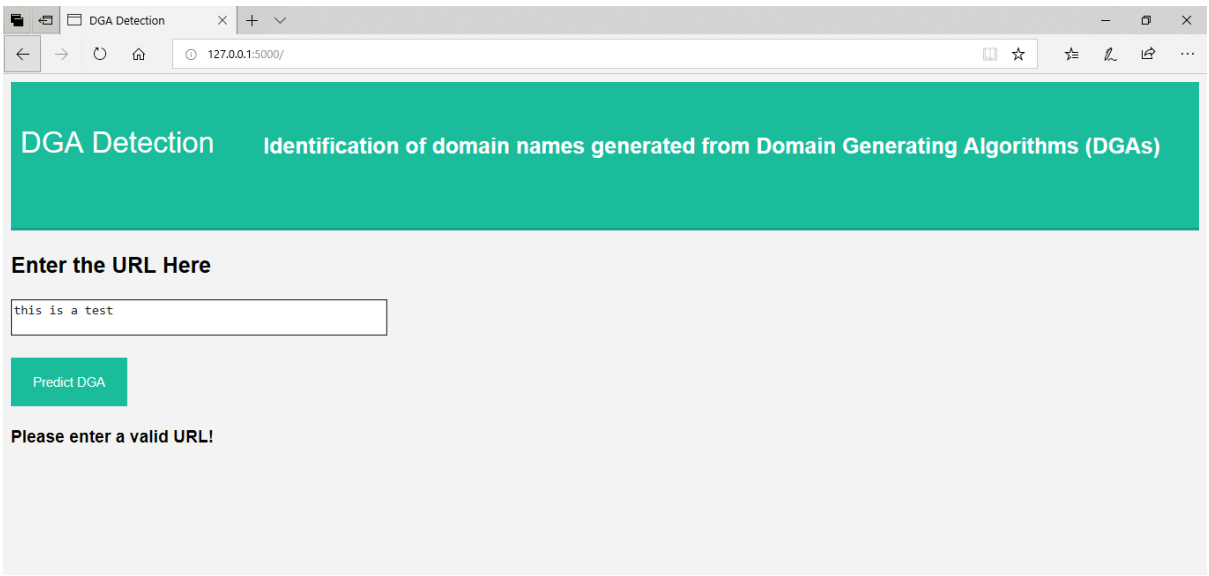
5. This will open the following web page. Use this simple intuitive web application to predict the domain names generated from a DGA.

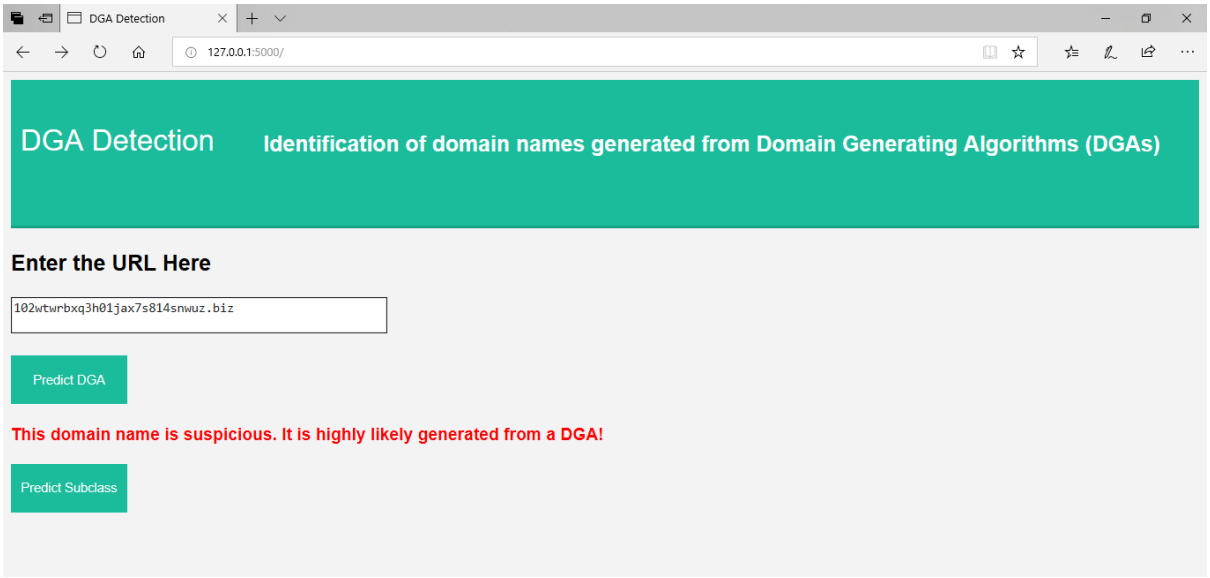


6. The following screenshots are just for reference.




DGA Detection
127.0.0.1:5000/subclass_result
DGA Detection
Identification of domains generated from Domain Generating Algorithms (DGAs)
Enter the URL Here
100bestbuy.com
Predict Subclass
Home
This domain name belongs to the subclass LEGIT


DGA Detection
127.0.0.1:5000/
DGA Detection
Identification of domain names generated from Domain Generating Algorithms (DGAs)
Enter the URL Here
this is a test
Predict DGA
Please enter a valid URL!


DGA Detection
127.0.0.1:5000/
DGA Detection
Identification of domain names generated from Domain Generating Algorithms (DGAs)
Enter the URL Here
102wtwrbxq3h01jax7s814snwuz.biz
Predict DGA
This domain name is suspicious. It is highly likely generated from a DGA!
Predict Subclass