Project Report

On

EMAIL SLICER

Submitted for partial fulfillment of the requirements

for the award of the degree of

Bachelor of Technology

Computer Science and Engineering

Submitted by

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Under supervision of

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JUNE, 2020

DECLARATION

I hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

Signature

Name: - Aman Kumar Thakur

Roll No.: - 1900290100020

Project Group:- CSEPY004

Date: - 30th June,2020

CERTIFICATE

This is to certify that Project Report entitled “Email Slicer” which is submitted by Aman Kumar Thakur in partial fulfillment of the requirement for the award of degree B.Tech in Department of Computer Science & Engineering of Dr. A.P.J. Abdul Kalam Technical University, Lucknow is a record of the candidates own work carried out by them under my supervision. The matter embodied in this report is original and has not been submitted for the award of any other degree.

Date: 30th June,2020

Supervisor

NEHA SHUKLA

(Assistant Professor)

ACKNOWLEDGEMENT

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I would also do not like to miss the opportunity to acknowledge the contribution of all the faculty members of the department for their kind assistance and cooperation during the development of our project. We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

Date: 30th June,2020

Signature:

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ABSTRACT

Python is a programming language that lets you work quickly and integrate systems more efficiently. And email slicer is also a way to make your work more efficiently and more accurately.

Email slicer is a handy program to get the username and domain name from an email address which helps in filtering emails and make ease to send a message to the user.

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System Requirements:

1. Operating system like Windows, Mac, Linux
2. Python 3 installed
3. Text editor like atom
4. Command Prompt for outputs
5. MS Word Document
6. Internet for output and references

Python Concepts Used:

1. Strip() Function
2. Index() Function
3. Slice() Function
4. Format() Function

Chapter 1

INTRODUCTION

1.Introduction:

Email slicer is a handy program to get the username and domain name from an email address, in which it takes an email address and just split the email address with reference of "@" and show us the domain name and user name.

It's a technical project which helps in filtering emails and make ease to send a message to the user.

2.Technologies used:

PYTHON

Python is a widely used general-purpose, high level programming language. It was created by Guido Van Rossum in 1991 and further developed by the Python Software Foundation. It was designed with an emphasis on code readability, and its syntax allows programmers to express their concepts in fewer lines of code,

Python is a programming language that lets you work quickly and integrate systems more efficiently.

There are two major Python versions: Python 2 and Python 3. Both are quite different.

It is used for:

- web development (server-side),
- software development,
- mathematics,
- system scripting.

WHAT CAN PYTHON DO?

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

WHY PYTHON?

- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc).
- Python has a simple syntax similar to the English language.
- Python has syntax that allows developers to write programs with fewer lines than some other programming languages.
- Python runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.
- Python can be treated in a procedural way, an object-orientated way or a functional way.

GOOD TO KNOW

- The most recent major version of Python is Python 3, which we shall be using in this tutorial. However, Python 2, although not being updated with anything other than security updates, is still quite popular.
- In this tutorial Python will be written in a text editor. It is possible to write Python in an Integrated Development Environment, such as Thonny, Pycharm, Netbeans or Eclipse which are particularly useful when managing larger collections of Python files.

PYTHON SYNTAX COMPARED TO OTHER PROGRAMMING LANGUAGES

- Python was designed for readability, and has some similarities to the English language with influence from mathematics.
- Python uses new lines to complete a command, as opposed to other programming languages which often use semicolons or parentheses.
- Python relies on indentation, using whitespace, to define scope; such as the scope of loops, functions and classes. Other programming languages often use curly-brackets for this purpose.

Requirements:

1. Basic knowledge of Python 3 or above

2. Installed Python compiler or Text editor's like Pycharm, Atom, Sublime etc. to run the program.

Chapter 2

Literarture Reviewed

1.DANCE OF THE ARTIFICIAL ALIGNMENTS AND ETHICS

KARAMJIT S. GILL

PUBLISHED ONLINE: 14 NOVEMBER 2019 © SPRINGER-VERLAG LONDON LTD., PART OF SPRINGER NATURE 2019

1.Introduction:

In this, we **face social challenges** of governance, ethics, accountability and intervention arising from the accelerated integration of powerful artificial intelligence systems into core social institutions. And also encounter the exponential rise of big data flows in networked communications and their manipulating algorithms . **Augmentation and automation** places the human in the predicament to accept the calculation of the machine without judgment. We can transcend the instrumental reason of machine thinking to mould technological futures for common good rather than turning them into a single story of 'singularity'.Our authors contribute to an on-going debate on **the narratives of artificial intelligence** and society, ranging from alignment, digital hermeneutics, ethics, augmentation to global catastrophic risks. The alignment **debate emphasises the alignment of the individual cognitive abilities** to the collective in geographically distributed digital organizations, supported by the concept of human validation.

2. Beginning of artificial technologies:

The technologies of the artificial are now beginning to generate a situation in which society is once again facing the specter of a new transformation. We need to draw upon various AI narratives of the relations between society and the scientific project of AI and the challenges it poses for us to come up with possible symbiotic AI futures. At a historical breaking point, the old society was deemed to be transformed into a new one. In this issue, our authors contribute to an on-going debate on the narratives of artificial intelligence and society, ranging from alignment, digital hermeneutics, ethics, augmentation to global catastrophic risks.

3. Vision of human and machine alignment:

We encounter a symbiotic vision of human and machine alignment narrative, in which truly intelligent cognitive machines perform human-like reasoning and learning with the capability of human-like motivation, emotion, and personality . This idea of alignment is that it goes beyond the thesis of the computational intelligence of deep learning and reinforcement learning. From the idea of human–machine alignment we move towards an augmentation hypothesis of a collective human–machine subject of wearable technologies.

4. Human ethics vs Machine ethics:

Ethics resides in the human dimension and not in the machine dimension. The ethical debate is thus seen as much broader than machine ethics. The argument is that ethics resides with the humans as decision makers and not in the behaviour of machines towards human users and perhaps other machines as well. Since human ethics is centred around the idea of having a mind, the idea of equivalence of machine mind and human mind is very problematic. The rule-based utilitarian approach for guiding the virtuous artificial moral agent, captures the most important features of the virtue-theoretic approach while realizing additional significant benefits . And further the utilitarian artificial moral agent incorporating both established moral rules and a utility calculator is especially well-suited for machine ethics. This collaboration envisions that ethics resides in the human dimension and not in the machine dimension. The ethical debate is thus seen as much broader than machine ethics.

5. Conclusion and Future works:

In exploring AI futures, the scientific project is always embedded within a particular social order and reflects the norms and ideology of that social order. In this perspective, science ceases to be seen as autonomous, as it internalises ideological assumptions thereby shaping the design of systems and tools and theoretical frameworks of its validation. It is undeniable that the drive of scientific knowledge has provided the material basis for a more full and dignified existence for the community as a whole, it must not however be a blind unthinking drive forward, shirking our social responsibility to critically examine its impact upon, and implications for, society. Digital modernity may not therefore be a sustainable goal for technology development. Science—like technology—must be uniquely at the service of the maintenance of the global order, organised around a universal appeal to" **crisis management**". AI—human socio-economic equality could prove detrimental. AI revolution is seen to bring extensive medical benefits to society, for example screening millions of skin abnormalities to diagnose a patient's abnormality and also in order to find the cause of Alzheimer. Artificially intelligent weapons systems can also be designed as to make decisions within the bounds of their ethics-based codes. Ethical LAWs(Lethal Autonomous Weapons) should be used to replace human involvement in war. The challenge is to create a strategic framework that facilitates imaginative and creative response to technologies of the artificial.

6.Literature cited and references:

Cooley MJ (2019) The search for alternatives: liberating human imagination: a mike cooley reader. Spokesman, Nottingham (forthcoming)

Gill KS (2018) Artifcial intelligence: looking though the Pygmalion Lens. AI SOC Springer 33(6):459–465. https ://doi.org/10.1007/ s0014 6-018-0866-0

Weizenbaum J (1976) Computer power and human reason: from judgment to calculation. W. H. Freeman, Francisco

2. APPLICATION AND RESEARCH OF C LANGUAGE PROGRAMMING EXAMINATION SYSTEM BASED ON B/S

C language programming is most one of important basic curriculums for computer curriculum teaching in science and engineering college. The traditional paper test is used in this curriculum examination. In order to meeting reformation needs of C language programming teaching, a paperless examination system based on WEB has been designed, The functions of the examination management and the curriculum examination of this system will be separated by the network frame of B/S. The design of database system uses the SQL Server 2005 to realize its convenience and commonality, The adaptive learning technology of difficulty coefficient of examination questions is presented in order to making the system have high efficiency of assembling test paper in this paper. What's more, different display orders of examination questions for those neighboring students through a new algorithm already are realized, every examination uses two sets of test paper, that is, student ID is odd number use the first set of paper, even number use the second set of paper, these measures can prevent examination cheats effectively, and fairness of each examination can be guaranteed. At the same time, this system have also resolved these problems such as that replacing machine and the second login because of other reasons and so on, these will ensure the security of examination. The technologies of automatic paper rating technology and automatic outputting report of examination results to Excel sheet etc. are used in order to realize functional requirements of the examination system such as automation.

The key Technologies of this examination system :-

1. Realizing and studying of the examination system security and usability.

2. Measures to prevent examination cheating.

3. Adaptive learning technology of examination questions difficult coefficient.

Application and Realization of Examination system:-

1. Realization of the examination system background and foreground.

2. Realization of generating test papers automatically.

3. Realization of submitting test paper answers and scores sum automatically.

Conclusion:-

This paper presents a useful model of examination system based on WEB, by using B/S network frame and the development platform of Visual studio 2005 C# and ASP.net and SQL server 2005 database to develop a examination system, and use this system to complete the curriculum examination of C language programming successfully. This examination system is divided to two parts of the foreground and the background.

Some key technologies and application algorithms such as the adaptive learning technology of examination questions difficulty coefficient and different display orders of examination

questions for those neighbouring students through a new algorithm are presented and realized in this paper, these technologies can prevent examination cheats.

3. DETECTION OF MEMORY LEAK IN C/C++ CODE VIA MACHINE LEARNING

HuMemory leaks are one of the primary cause of software ageing. Despite of recent countermeasures in C/C++ such as smart pointers, leak-related defects remain a troublesome issue in C/C++ code, especially in legacy applications.

We propose an approach for automatic detection of memory leaks in C/C++ programs based on characterizing memory allocation sites via the age distribution of the non-disposed memory chunks allocated by such a site. We instrument malloc and free calls in C/C++ and collect for each allocation site data on the number of allocated memory fragments, their lifetimes, and sizes. Based on this data we compute feature vectors and train a machine learning classifier to differentiate between leaky and defect-free allocation sites.

Another aspect of memory leaks concerns their severeness. A single or few small leaking objects will likely not create a noticeable impact on program performance and can therefore be ignored. This is especially true when the program terminates before more objects accumulate. Therefore, effective approaches for memory leak detection should focus on scenarios where many and especially many large objects are continuously leaking.

Approach Description:-

Our approach has the following workflow. We collect metrics concerning memory/object allocations and deallocations at runtime for each allocation site. This data is processed off-line to compute features for the classification task. For the training phase, data is collected from applications with artificially injected leaks. With this data we train decision trees, where features are derived from measurements and labels state whether an allocation site is leaky, or not. In the evaluation phase (under cross-validation), we use the trained classifiers to predict whether an allocation site is leaky, and compare the predictions for out of sample.

1. GenCount-Metric for Growth Analysis in C/C++.
2. Data Collection.
3. Metric and Feature Computation.
4. Leak Detection and Discussion of Alternatives.

Evaluation:-

1. Accuracy of Leak Detection.
2. Feature Visualization.
3. Performance Overhead.

Conclusion:-

We presented an approach for memory leak detection in C/C++ using growth analysis, specifically the GenCount concept . We extended it beyond the original approach by introducing additional metrics and features.

The memory overhead of our method is low (typically only few MBytes) and can parametrized by setting the size of an event buffer. The runtime overhead is below 5% for programs with at most 100,000 allocation/deallocation events per second and increases to around 20% if this rate surpasses one million. To evaluate our approach, we injected

synthetic leaks into multiple SPEC CPU2006 applications and collected data from defective and error-free allocation sites.

4. SMART SENSOR - ANALYSIS OF DIFFERENT TYPES OF IOT SENSORS

Internet of Things (IOT) is a revolutionary technology. It is revolutionizing our world with trillions of sensors and actuators by creating a smart environment around

us. In scientific research, sensors are considered as a prospective field. Ubiquitous sensing abilities offer shared information to develop a common operating picture. IOT sensors are efficiently used in various IOT applications for creating a smart environment. This paper presents several IOT sensors and also explains various sensor based IOT applications. Furthermore, after analyzing different sensor applications, this article enlightens which IOT application requires which type of sensor. In the future, this work will serve as the basis for further research work in the related area.

Types of Sensor:-

•Proximity Sensors.

•Position Sensors

•Occupancy Sensors

•Motion Sensors

•Velocity sensors

•Temperature sensors

•Pressure Sensors

•Chemical Sensors

•Humidity Sensors

•Water Quality Sensors

•Infrared Sensors

•Gyroscope Sensors

•Optical Sensors

•Chemical Sensors

Conclusion:-

Internet of Things (IOT) , is revolutionizing our world by creating a smart environment around us. In any IOT based smart application, sensors play a key role in the automation of application by making it smarter to respond without any human intervention. This paper presents various types of sensors in IOT enabled smart environment. IOT sensors can

be effectively used for health, water, transport, home appliances, garbage, agriculture, cattle, and etc. In any particular smart application, IOT integrates various types of sensors having the capability to communicate with each other

wisely and remotely. This paper analyzes different IOT sensors and sensor-based IOT applications and enlightens which sensors are used in different IOT applications. In the future, this study will help us to develop a sensor based IOT application.

5. INTERNET OF THINGS- A SURVEY ON ENABLING TECHNOLOGIES, PROTOCOLS AND APPLICATIONS.

This paper provides an overview of the Internet of Things (IOT) with emphasis on enabling technologies, protocols, and application issues. The IOT is enabled by the latest developments in RFID, smart sensors, communication technologies, and Internet protocols. The basic premise is to have smart sensors collaborate directly without human involvement to deliver a new class of applications. The current revolution in Internet, mobile, and

machine-to-machine (M2M) technologies can be seen as the first phase of the IOT. In the coming years, the IOT is expected to bridge diverse technologies to enable new applications by connecting physical objects together in support of intelligent decision making.This paper starts by providing a horizontal overview of the IOT.

Then, we give an overview of some technical details that pertain to the IOT enabling technologies, protocols, and applications. Compared to other survey papers in the field, our objective is to provide a more thorough summary of the most relevant protocols and application issues to enable researchers and application developers to get up to speed quickly on how the different protocols fit together to deliver desired functionalities without having to go through RFCs and the standards specifications. We also provide an over-view

of some of the key IOT challenges presented in the recent literature and provide a summary of related research work. Moreover, we explore the relation between the IOT and other emerging technologies including big data analytics and cloud and fog computing. We also present the need for better horizontal integration among IOT services. Finally, we present detailed service use-cases to illustrate how the different protocols presented in the paper fit together to deliver desired IOT services.

IOT Elements:-

1. Identification
2. Sensing.
3. Communication
4. Computation
5. Services.
6. Semantics

Conclusion:-

The emerging idea of the Internet of Things (IOT) is rapidly finding its path throughout our modern life, aiming to improve the quality of life by connecting many smart devices, technologies, and applications. Overall, the IOT would allow for the automation of everything around us. This paper presented an overview of the premise of this concept, its enabling technologies, protocols, applications, and the recent research addressing different aspects of the IOT. This, in turn, should provide a good foundation for researchers and practitioners who are interested to gain an insight into the IOT technologies and protocols to understand the overall architecture and role of the different components and protocols that constitute the IOT. Further, some of the challenges and issues that pertain to the design and deployment of IOT implementations have been presented. Moreover, the interplay between the IOT, big data analytics, cloud and fog computing has been discussed.

We finally presented the need for new “smart” autonomic management, data aggregation, and protocol adaptation services to achieve better horizontal integration among IOT service. Finally, detailed application-use cases were presented to illustrate typical protocol integration services.

Chapter 3

FUNCTIONS

1.Slice()

A slice object is used to specify how to slice a sequence. We can specify where to start slicing and where to end .we can also specify the step, which allows you to e.g. slice only every other item.

The slice() function returns a slice object**.**

Syntax

Slice(start,end,step)

2.Index()

Index() is an inbuilt function in Python, which searches for given element from start of the list and returns the lowest index where the element appears.

The index() function returns lowest index where the element appears.

Syntax

List_name.index(element, start, end)

3.Strip()

Strip() is an inbuilt function in Python programming language that returns a copy of the string with both leading and trailing characters removed(based on the string argument passed).

The strip() function returns a copy of the string with both leading and trailing characters removed.

Syntax

String.strip([chars])

4.Format()

Format() is one of the string formatting methods in Python, which allows multiple substitutions and value Formatting. This method lets us concatenate elements within a string through positional formatting.

Formatter work by putting in one or more replacement fields and placeholders defined by a pair of curly braces {} into a string and calling the str.format(). The value we wish to put into the placeholders and concatenate with the string passed as parameters into the format function.

It returns a formatted string with the value passed as parameter in the placeholder position.

Syntax

{}.format(value)

Chapter 4

PROCESSING

1.Process:

- It asks for the email address
- Enter the email address
- It strip the email address which removes characters from both left and right based on the argument.
- It search for the index of "@" in the string by using index() function which returns the index of the specified element in the list.
- It will slice out the whole characters before the index of "@" which gives us **username**.
- It will slice out the whole characters after the index of "@" which gives us **domain name**.
- It will print the username and domain name of the email address.

2. Algorithm of Email slicer:

Step 1: Get user email address

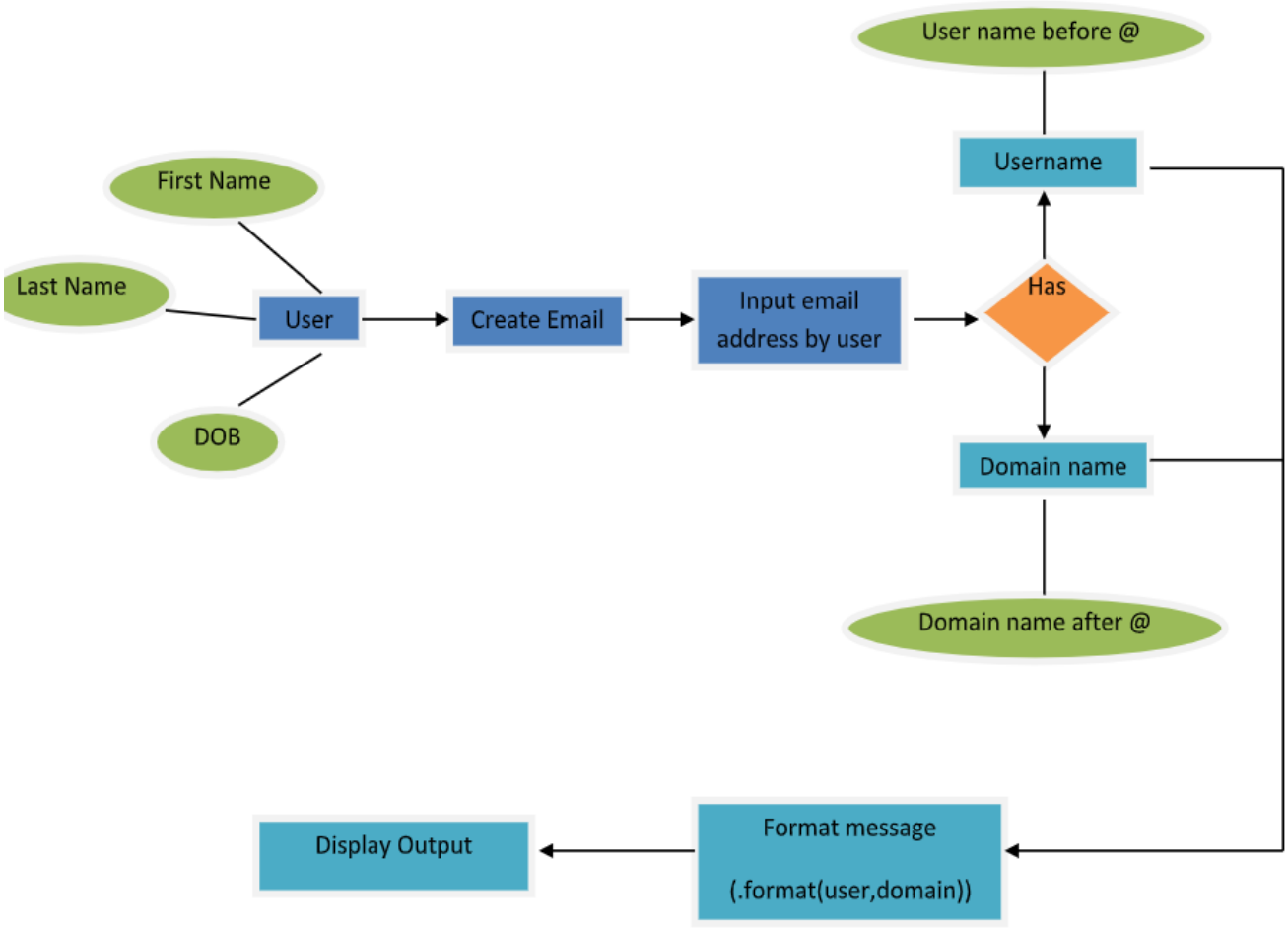
Step 2: Slice out the username

Step 3: Slice out the domain name

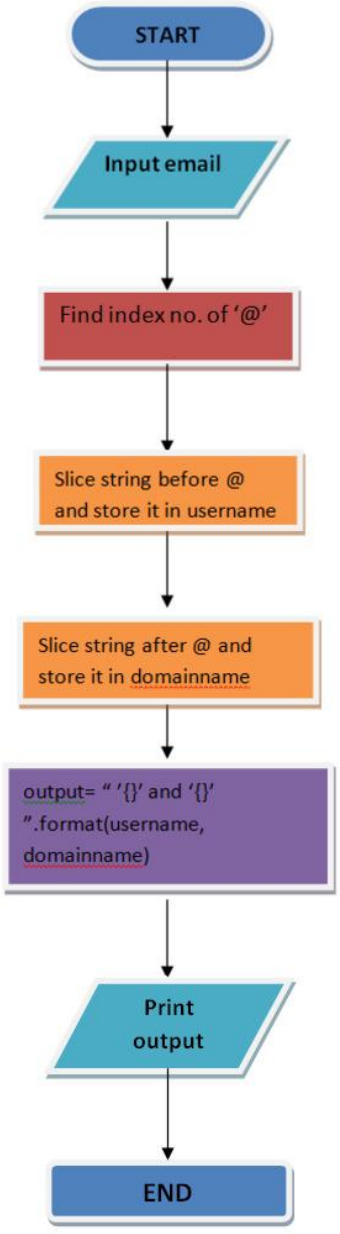
Step 4: Format messages

Step 5: Display output message

3.Entity Relationship Diagram(ERD):



4.Flow chart of Email slicer:



Chapter 5

Code and Outputs

1.Code:

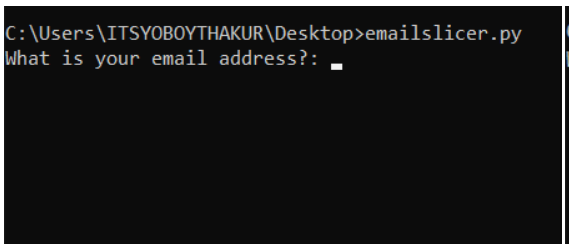
```
# Get user email address
email = input("What is your email address?: ")

email= email.strip()

a=email.index('@')

# Slice out the user name
user_name = email[:a]

# Slice the domain name
domain_name = email[a+1:]

# Format message
output = "Your username is '{}' and your domain name is
'{}'".format(user_name,domain_name)
# Display output message
print(output)
```

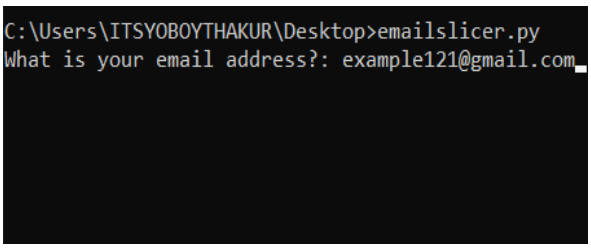
```python
email = input("What is your email address?: ")

email=email.strip()

a=email.index('@')

# Slice out the user name
user_name = email[:a]

# Slice the domain name
domain_name = email[a+1:]

# Format message
output = "your username is '{}' and domain name is '{}'".format(user_name,domain_name)

# Display output message
print(output)

```

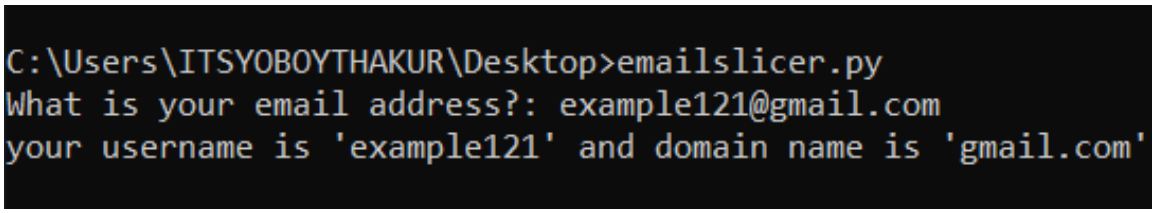
2.Outputs:

What is your email address?: **example121@gmail.com**

your username is **'example121'** and domain name is **'gmail.com'**







Chapter 6

CONCLUSIONS AND FUTURE SCOPE

1.Importance:

This is important for send large files over long distances. Many firewalls and pop server restrictions on the maximum size of emails going through. So with the help of slicing, we can split the file and send through username or domain name.

2.Future works:

It can be used as a filter which will separate the user amongst all email addresses and also after some implementations, it can also be customized to text that user.

It will also help huge working IT industries to differentiate mails by filtering the domain name and username.

3.Conclusion:

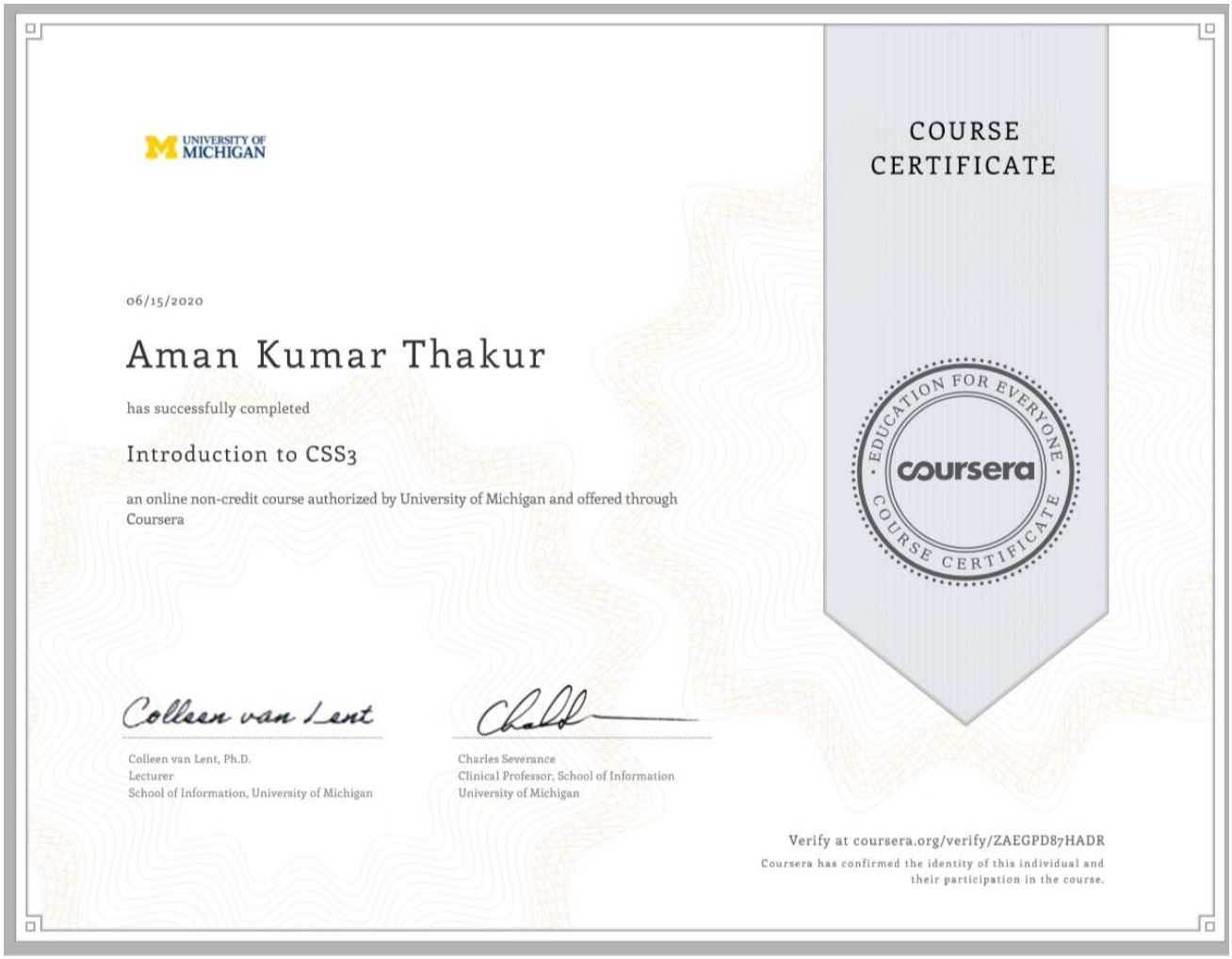
This is a convenient program that has a lot of use in future.

With the help of this project, we can customize the application and send a message to the host with this information.

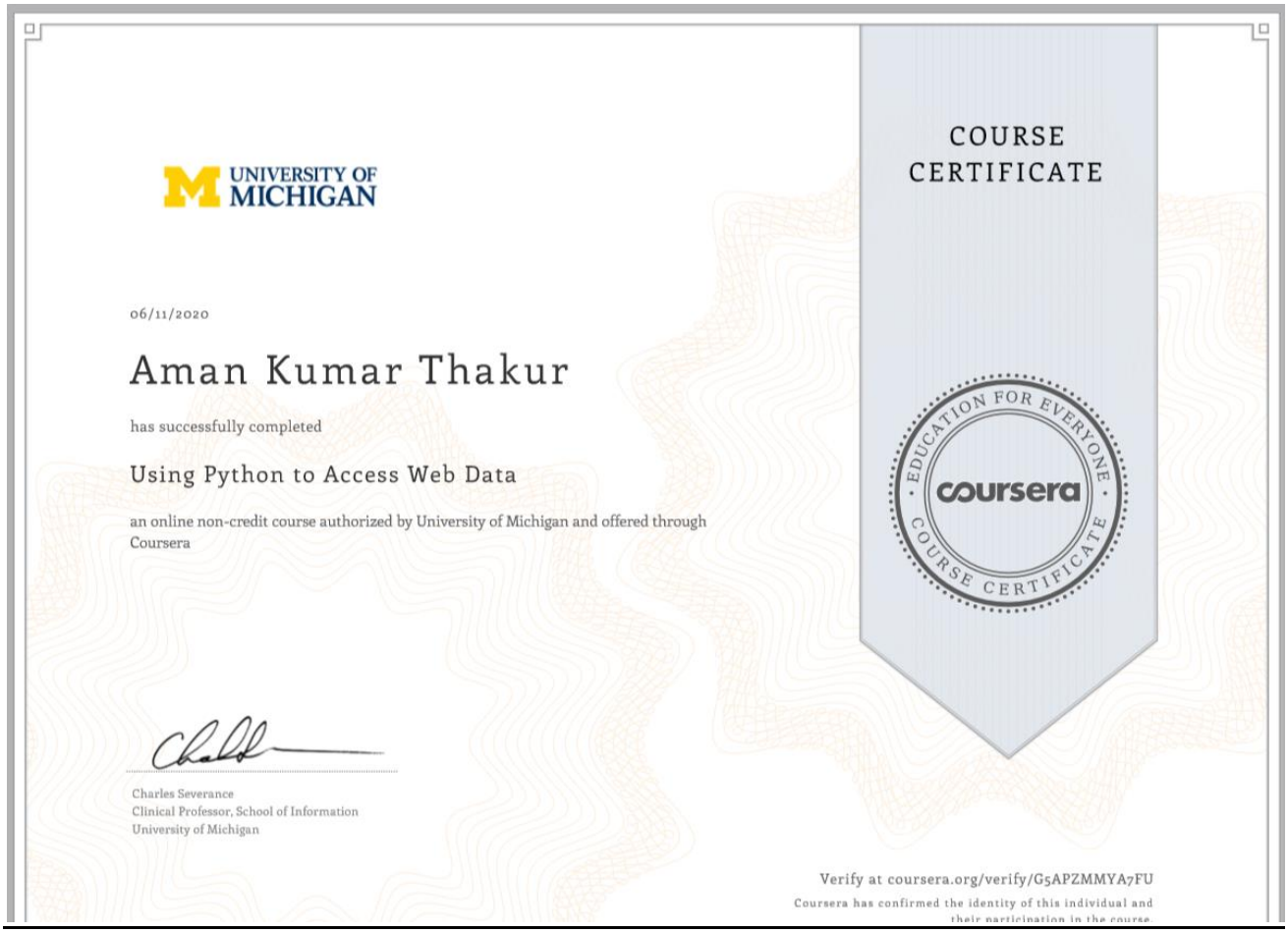
Firstly we took email address as input then after stripping the text, indexing the position of "@", slicing the characters before and after index no. of "@", **we got our *username* and *domain name***.

COURSE CERTIFICATES

1.Introduction to CSS3



2.Using Python to access Web Data



References:

- www.geeksforgeeks.org
- www.w3schools.com
- www.stackoverflow.com
- www.tutorialpoint.com
- www.coursera.org
- www.youtube.com

THANK YOU