DAILY ONLINE ACTIVITIES SUMMARY

Date:	**29-05-2020**	**Name:**	**M.C Suchithra Heggade**
Sem & Sec	**VI A**	**USN:**	**4AL17CS047**

Online Test Summary

Subject	**OR IA Test**		
Max. Marks	**30**	**Score**	**30**

Certification Course Summary

Course	**Cloud Foundations**		
Certificate Provider	**Great Learning**	**Duration**	**5hr**

Coding Challenges

Problem Statement:

1. Lowercase and uppercase

Python program to calculate the number of lowercase and uppercase letters in a string

2.shuffle string

We are given 3 strings: str1, str2, and str3. Str3 is said to be a shuffle of str1 and str2 if it can be formed by interleaving the characters of str1 and str2 in a way that maintains the left to right ordering of the characters from each string. For example, given str1="abc" and str2="def", str3="dabecf" is a valid shuffle since it preserves the character ordering of the two strings. So, given these 3 strings write a function that detects whether str3 is a valid shuffle of str1 and str2.

3.Chinese Remainder Theorem.

Write a c program to solve a system of linear congruences by applying the Chinese Remainder Theorem.

4.Armstrong Number

Write a Java Program to check whether the given number is Armstrong number or not

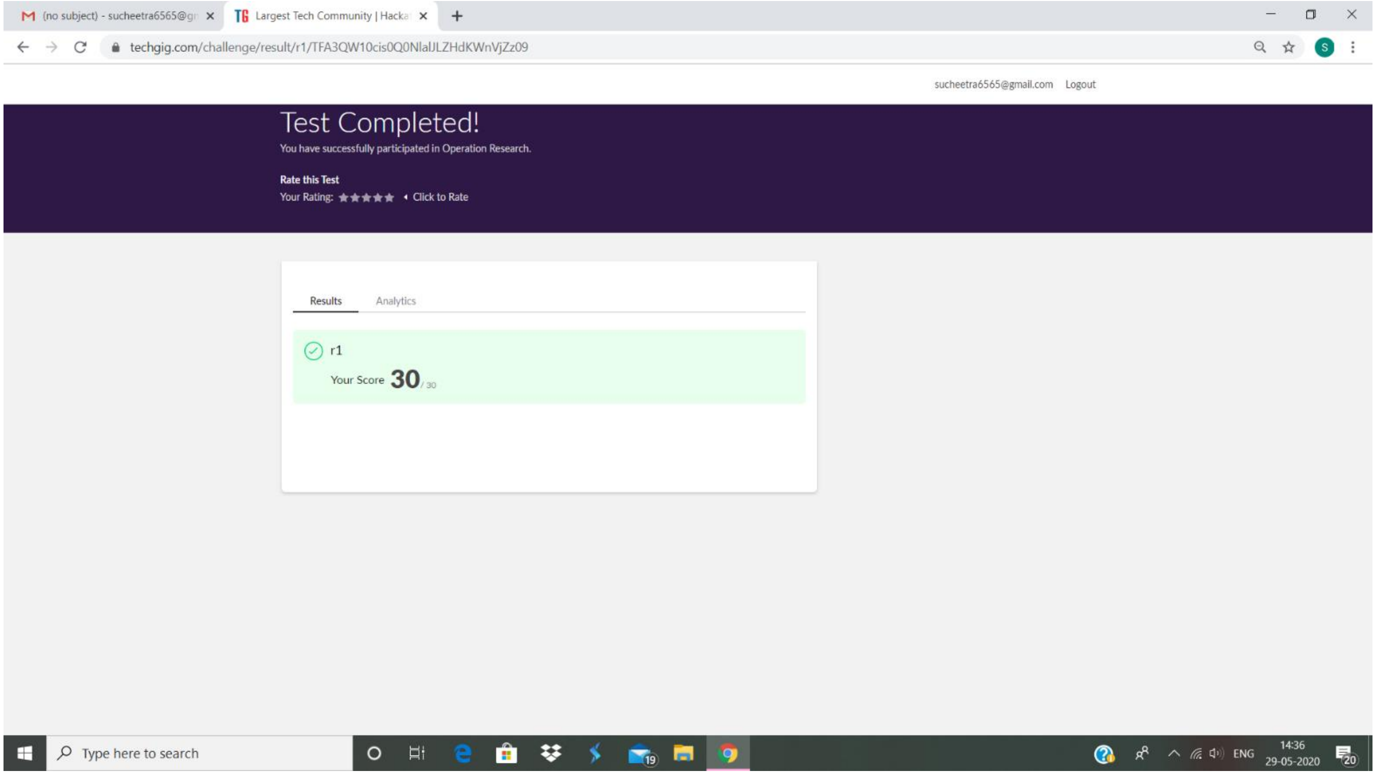
5.Substring

Write a Java Program to find longest substring without repeating characters in a string.

Status: Completed

Uploaded the report in GitHub	**Yes**
If yes Repository name	https://github.com/Suchitraheggade/certification-and-online-coding
Uploaded the report in slack	**Yes**

Online test Detail:


(no subject) - sucheetra6565@gr
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Test Completed!

You have successfully participated in Operation Research.

Rate this Test

Your Rating: ★★★★★ Click to Rate

Results | Analytics

r1

Your Score 30/30

Online Certification Details

Modules completed:

Introduction to Virtualization.

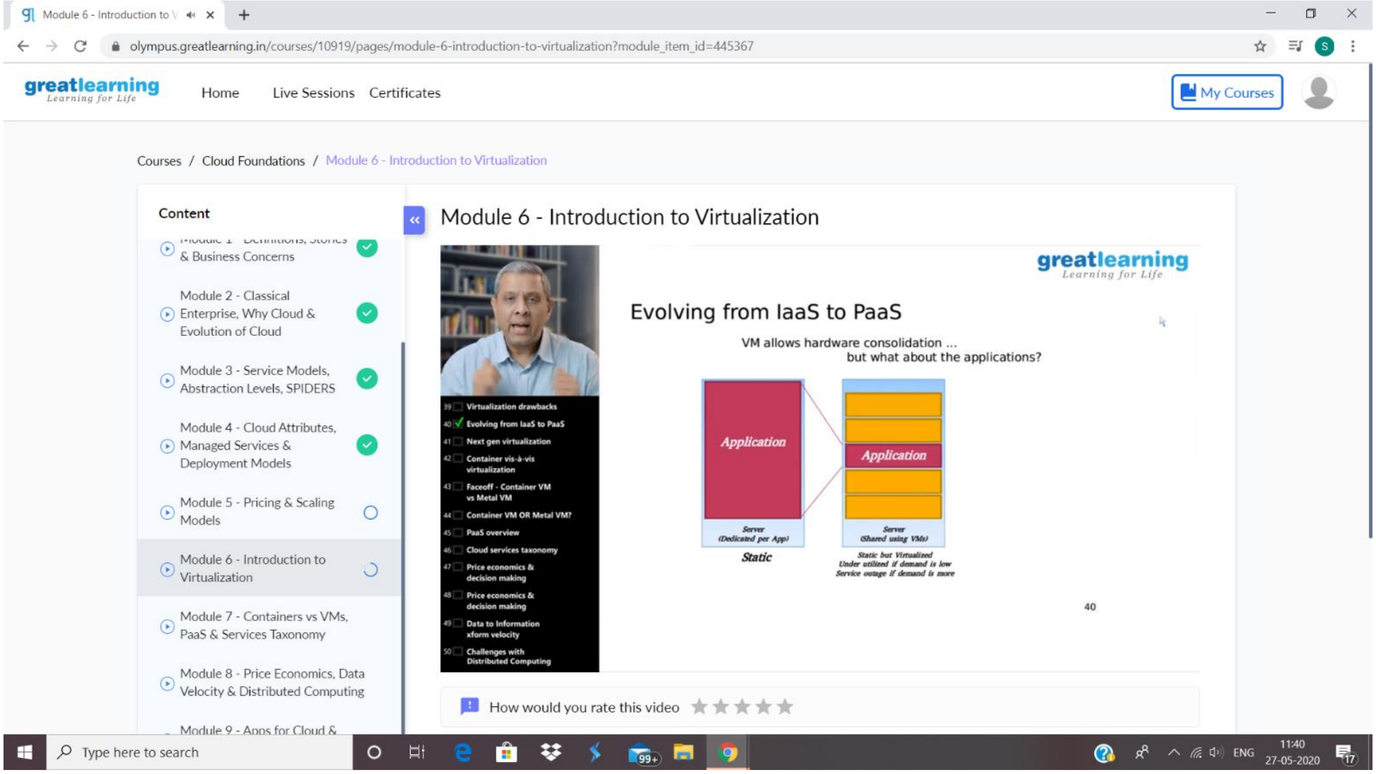
Containers vs VMs, PaaS and Services Taxonomy.

Price Economics Data Velocity and distributed Computing

Apps for cloud and security Model.

Infra, Automation, Abstraction, Provisioning, Allied Tech.

Summarization.



Module 6 - Introduction to V
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Courses / Cloud Foundations / Module 6 - Introduction to Virtualization

Content

- & Business Concerns ✓
- Module 2 - Classical Enterprise, Why Cloud & Evolution of Cloud ✓
- Module 3 - Service Models, Abstraction Levels, SPIDERS ✓
- Module 4 - Cloud Attributes, Managed Services & Deployment Models ✓
- Module 5 - Pricing & Scaling Models ○
- Module 6 - Introduction to Virtualization
- Module 7 - Containers vs VMs, PaaS & Services Taxonomy
- Module 8 - Price Economics, Data Velocity & Distributed Computing
- Module 9 - Apps for Cloud &

Module 6 - Introduction to Virtualization

- 39 □ Virtualization drawbacks
- 40 ✓ Evolving from IaaS to PaaS
- 41 □ Next gen virtualization
- 42 □ Container vis-à-vis virtualization
- 43 □ Faceoff - Container VM vs Metal VM
- 44 □ Container VM OR Metal VM?
- 45 □ PaaS overview
- 46 □ Cloud services taxonomy
- 47 □ Price economics & decision making
- 48 □ Price economics & decision making
- 49 □ Data to Information xform velocity
- 50 □ Challenges with Distributed Computing

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Evolving from IaaS to PaaS

VM allows hardware consolidation ...
but what about the applications?

How would you rate this video ☆☆☆☆☆

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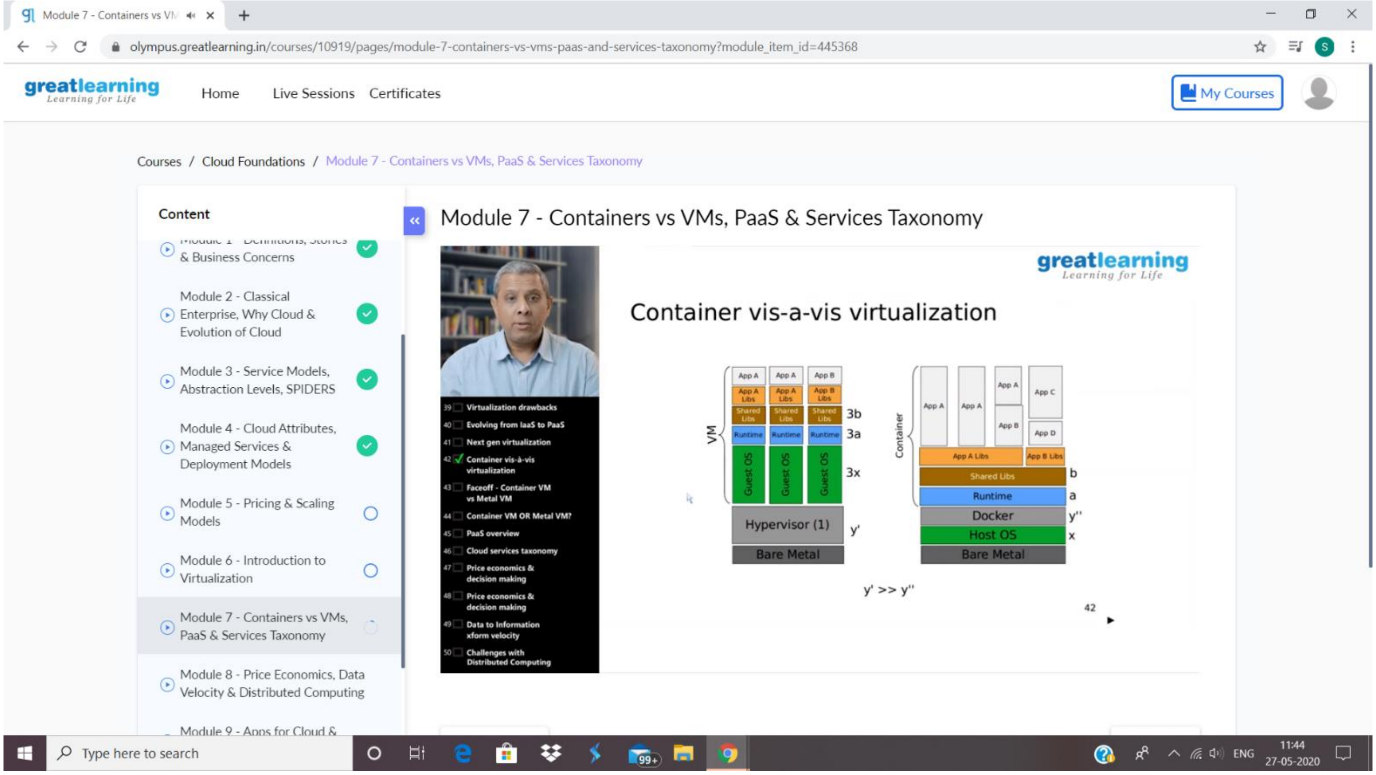

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- Module 2 - Classical Enterprise, Why Cloud & Evolution of Cloud ✓
- Module 3 - Service Models, Abstraction Levels, SPIDERS ✓
- Module 4 - Cloud Attributes, Managed Services & Deployment Models ✓
- Module 5 - Pricing & Scaling Models ○
- Module 6 - Introduction to Virtualization ○
- Module 7 - Containers vs VMs, PaaS & Services Taxonomy
- Module 8 - Price Economics, Data Velocity & Distributed Computing
- Module 9 - Apps for Cloud &

Module 7 - Containers vs VMs, PaaS & Services Taxonomy

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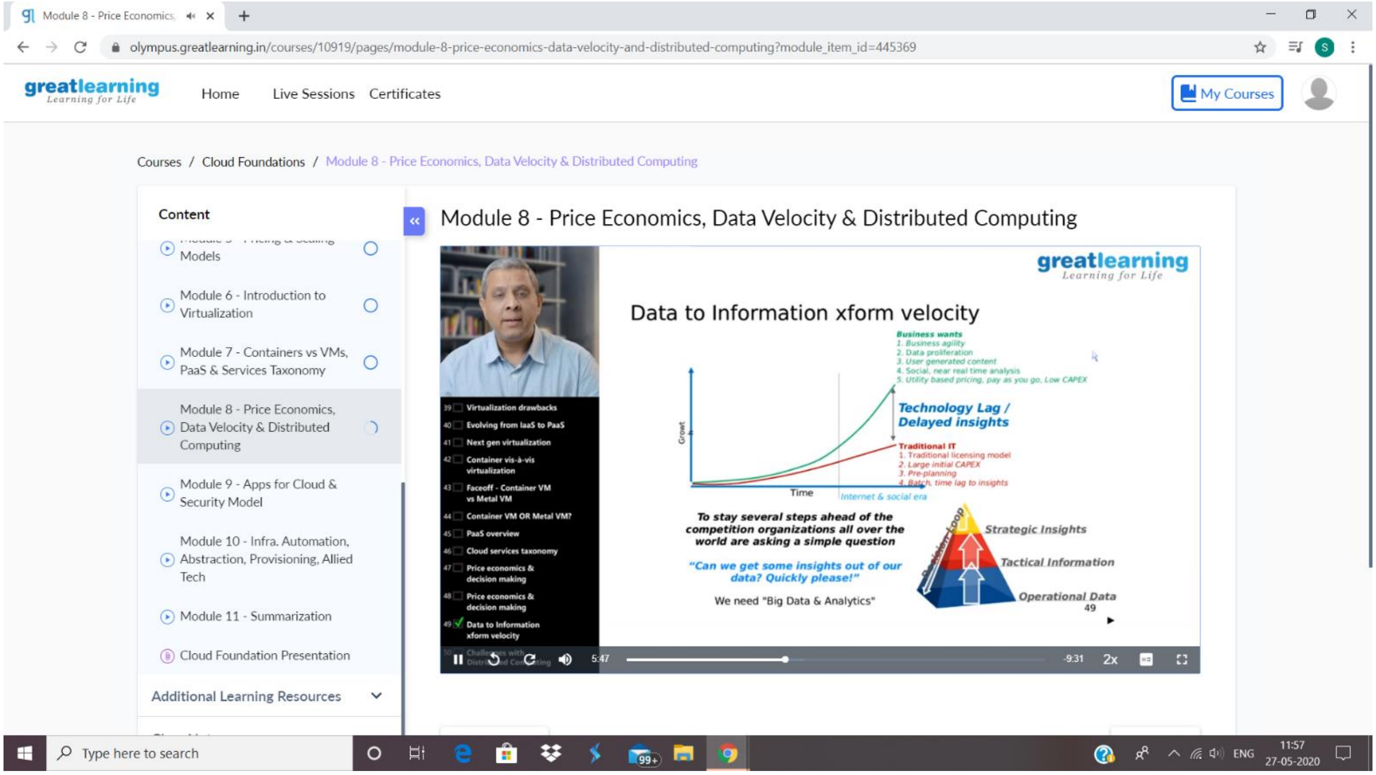
Container vis-a-vis virtualization

y' >> y''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Courses / Cloud Foundations / Module 8 - Price Economics, Data Velocity & Distributed Computing

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- Models ○
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- Module 8 - Price Economics, Data Velocity & Distributed Computing
- Module 9 - Apps for Cloud & Security Model
- Module 10 - Infra. Automation, Abstraction, Provisioning, Allied Tech
- Module 11 - Summarization
- Cloud Foundation Presentation

Additional Learning Resources

Module 8 - Price Economics, Data Velocity & Distributed Computing

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50 Challenges with Distributed Computing

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Data to Information xform velocity

Business wants
1. Business agility
2. Data proliferation
3. User generated content
4. Social, near real time analysis
5. Utility based pricing, pay as you go, Low CAPEX
Technology Lag / Delayed insights
Traditional IT
1. Traditional licensing model
2. Large initial CAPEX
3. Pre-planning
4. Batch, time lag to insights
Growt
Time
Internet & social era
Strategic Insights
Tactical Information
Operational Data
Decision Loop

To stay several steps ahead of the competition organizations all over the world are asking a simple question

"Can we get some insights out of our data? Quickly please!"

We need "Big Data & Analytics"

49

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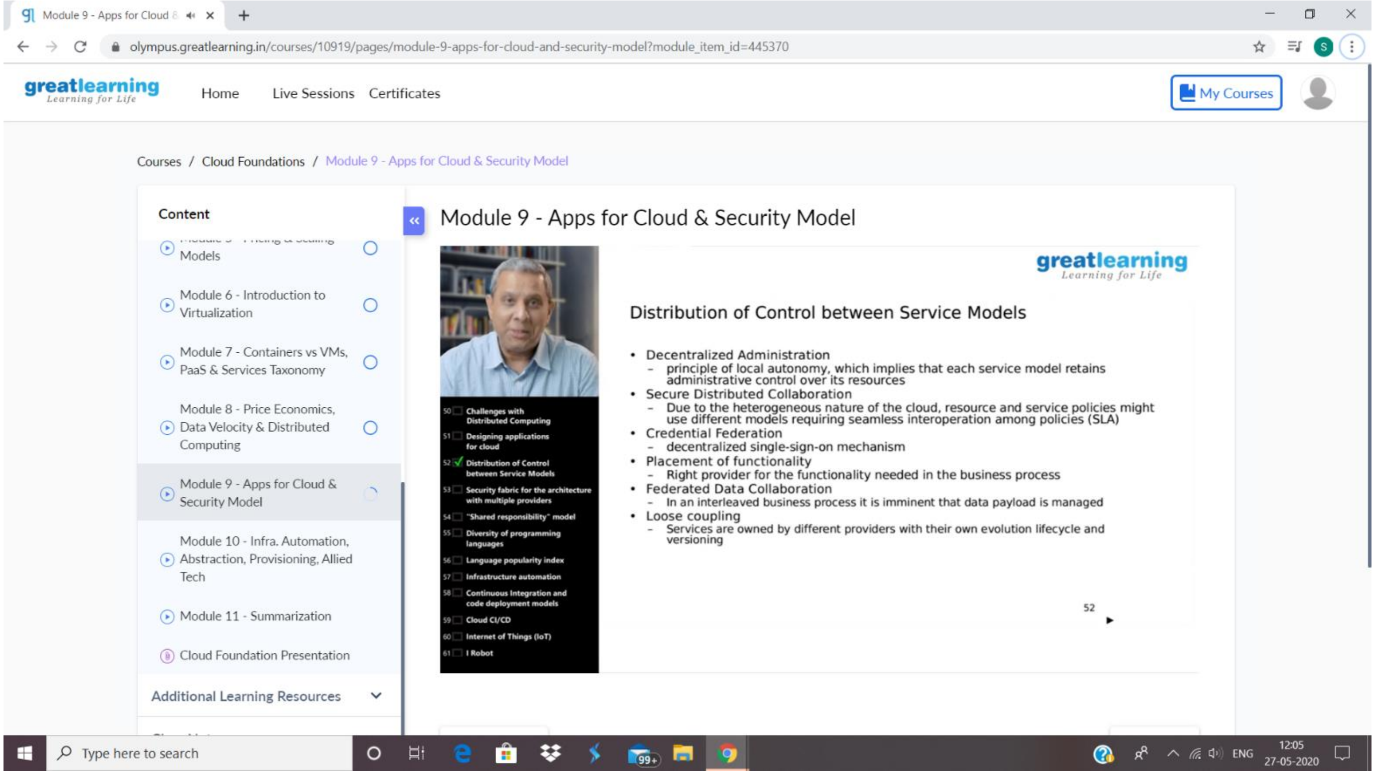
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Courses / Cloud Foundations / Module 9 - Apps for Cloud & Security Model

Content

- Models ○
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- Module 7 - Containers vs VMs, PaaS & Services Taxonomy ○
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- Module 9 - Apps for Cloud & Security Model
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- Module 11 - Summarization
- Cloud Foundation Presentation

Additional Learning Resources

Module 9 - Apps for Cloud & Security Model

50 □ Challenges with Distributed Computing
51 □ Designing applications for cloud
52 ✓ Distribution of Control between Service Models
53 □ Security fabric for the architecture with multiple providers
54 □ "Shared responsibility" model
55 □ Diversity of programming languages
56 □ Language popularity index
57 □ Infrastructure automation
58 □ Continuous Integration and code deployment models
59 □ Cloud CI/CD
60 □ Internet of Things (IoT)
61 □ I Robot

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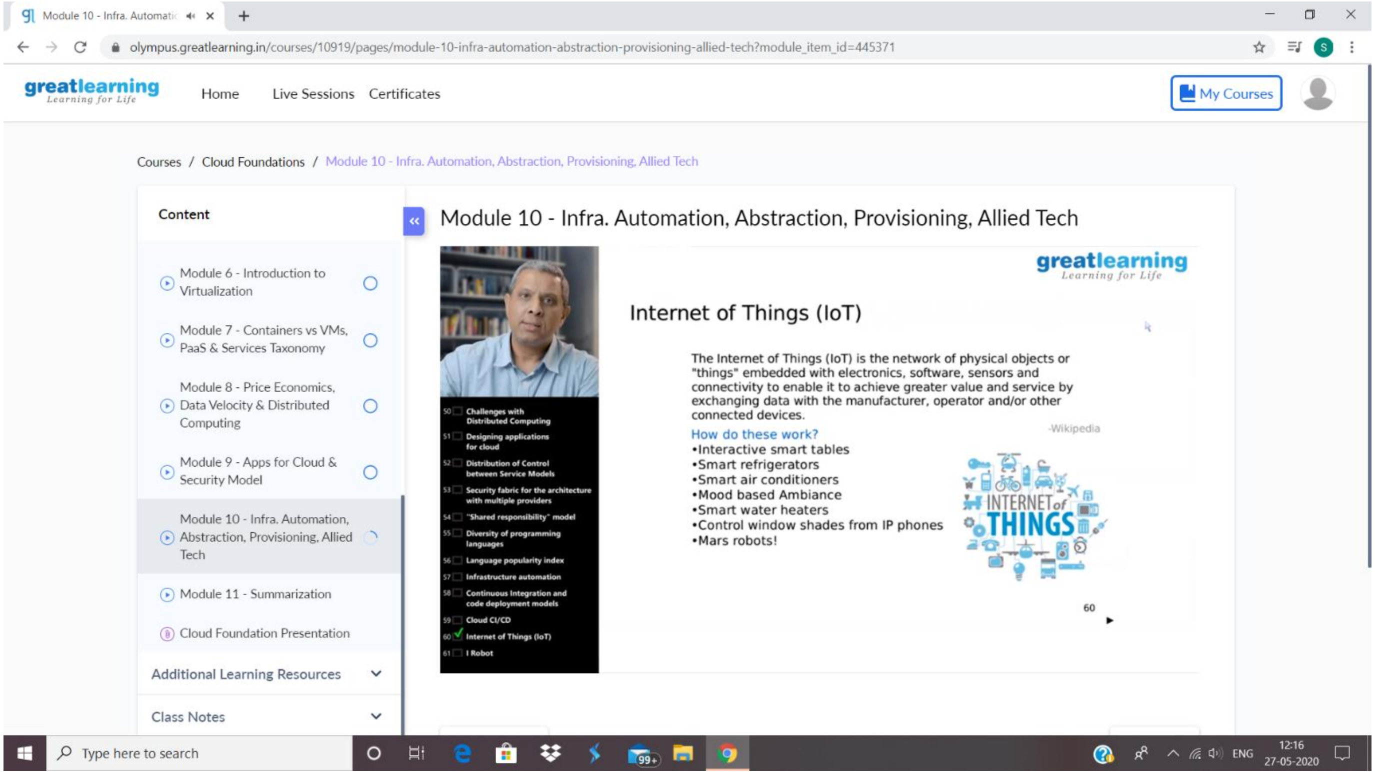
Distribution of Control between Service Models

- Decentralized Administration
  - principle of local autonomy, which implies that each service model retains administrative control over its resources
- Secure Distributed Collaboration
  - Due to the heterogeneous nature of the cloud, resource and service policies might use different models requiring seamless interoperation among policies (SLA)
- Credential Federation
  - decentralized single-sign-on mechanism
- Placement of functionality
  - Right provider for the functionality needed in the business process
- Federated Data Collaboration
  - In an interleaved business process it is imminent that data payload is managed
- Loose coupling
  - Services are owned by different providers with their own evolution lifecycle and versioning

52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Courses / Cloud Foundations / Module 10 - Infra. Automation, Abstraction, Provisioning, Allied Tech

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- Module 6 - Introduction to Virtualization ○
- Module 7 - Containers vs VMs, PaaS & Services Taxonomy ○
- Module 8 - Price Economics, Data Velocity & Distributed Computing ○
- Module 9 - Apps for Cloud & Security Model ○
- Module 10 - Infra. Automation, Abstraction, Provisioning, Allied Tech
- Module 11 - Summarization
- Cloud Foundation Presentation

Additional Learning Resources

Class Notes

Module 10 - Infra. Automation, Abstraction, Provisioning, Allied Tech

50 □ Challenges with Distributed Computing
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Internet of Things (IoT)

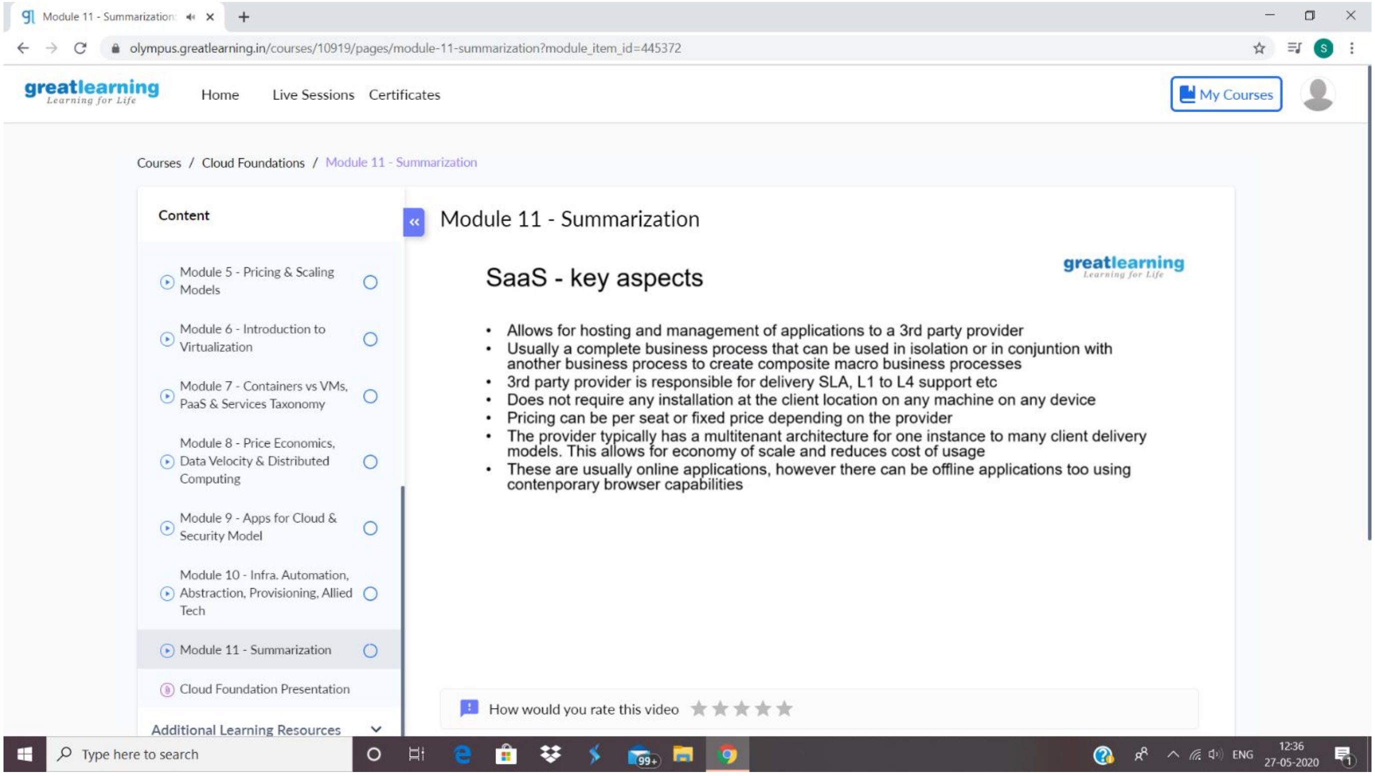
The Internet of Things (IoT) is the network of physical objects or "things" embedded with electronics, software, sensors and connectivity to enable it to achieve greater value and service by exchanging data with the manufacturer, operator and/or other connected devices.

-Wikipedia

How do these work?

•Interactive smart tables
•Smart refrigerators
•Smart air conditioners
•Mood based Ambiance
•Smart water heaters
•Control window shades from IP phones
•Mars robots!

60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Courses / Cloud Foundations / Module 11 - Summarization

Content

- Module 5 - Pricing & Scaling Models ○
- Module 6 - Introduction to Virtualization ○
- Module 7 - Containers vs VMs, PaaS & Services Taxonomy ○
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- Cloud Foundation Presentation

Additional Learning Resources

Module 11 - Summarization

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SaaS - key aspects

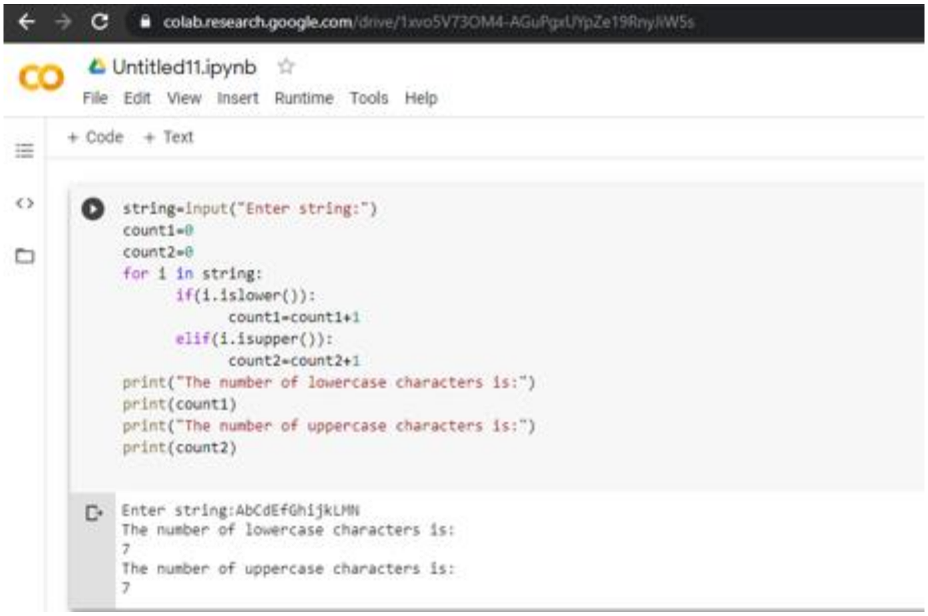
- Allows for hosting and management of applications to a 3rd party provider
- Usually a complete business process that can be used in isolation or in conjuntion with another business process to create composite macro business processes
- 3rd party provider is responsible for delivery SLA, L1 to L4 support etc
- Does not require any installation at the client location on any machine on any device
- Pricing can be per seat or fixed price depending on the provider
- The provider typically has a multitenant architecture for one instance to many client delivery models. This allows for economy of scale and reduces cost of usage
- These are usually online applications, however there can be offline applications too using contenporary browser capabilities

How would you rate this video ☆☆☆☆☆

Coding Challenge Details

1. Lowercase and uppercase

Python program to calculate the number of lowercase and uppercase letters in a string.

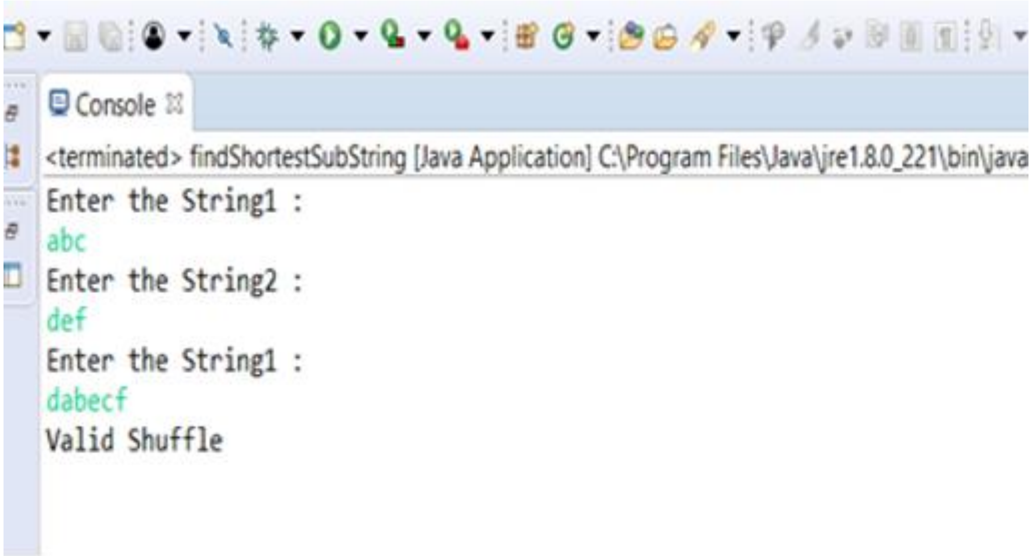

colab.research.google.com/drive/1xvo5V73OM4-AGuPgxUYpZe19RnyiW5s
Untitled11.ipynb
File Edit View Insert Runtime Tools Help
+ Code + Text

```
string=input("Enter string:")
count1=0
count2=0
for i in string:
      if(i.islower()):
            count1=count1+1
      elif(i.isupper()):
            count2=count2+1
print("The number of lowercase characters is:")
print(count1)
print("The number of uppercase characters is:")
print(count2)
```

```
Enter string:AbCdEfGhijkLMN
The number of lowercase characters is:
7
The number of uppercase characters is:
7
```

2.shuffle string

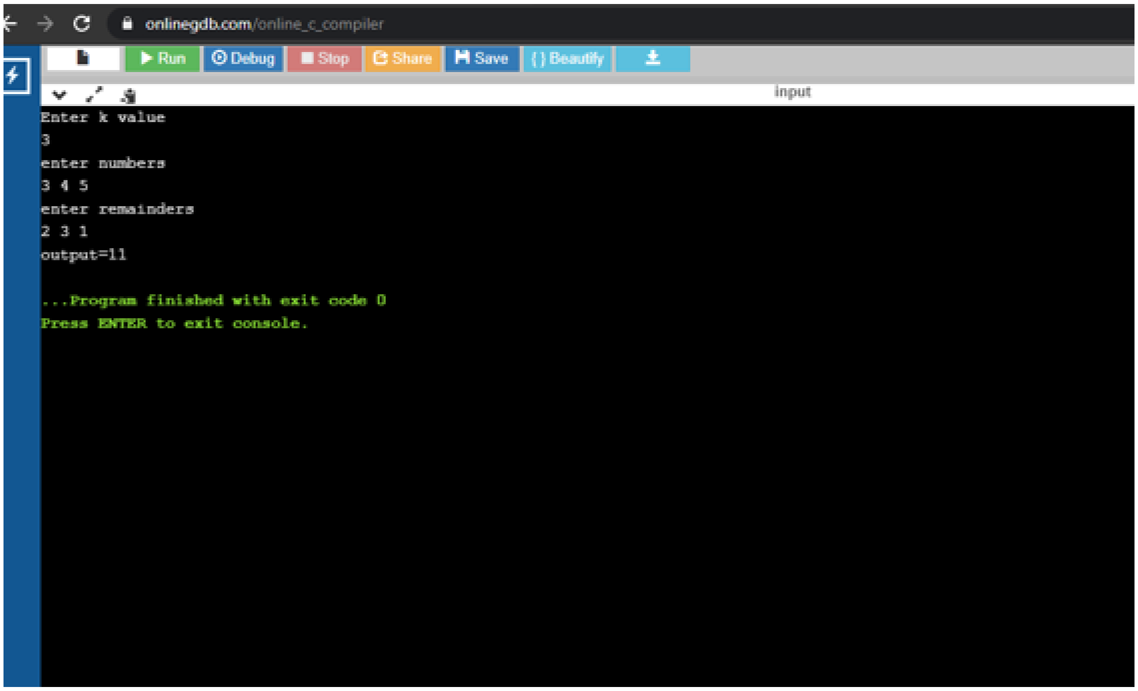
We are given 3 strings: str1, str2, and str3. Str3 is said to be a shuffle of str1 and str2 if it can be formed by interleaving the characters of str1 and str2 in a way that maintains the left to right ordering of the characters from each string. For example, given str1="abc" and str2="def", str3="dabecf" is a valid shuffle since it preserves the character ordering of the two strings. So, given these 3 strings write a function that detects whether str3 is a valid shuffle of str1 and str2.



```
<terminated> findShortestSubString [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\java
Enter the String1 :
abc
Enter the String2 :
def
Enter the String1 :
dabecf
Valid Shuffle
```

3.Chinese Remainder Theorem.

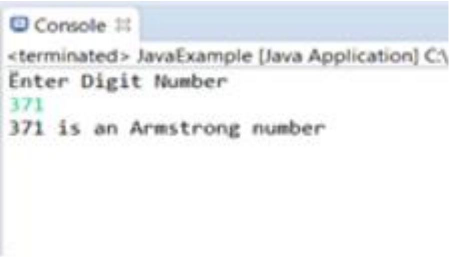
Write a c program to solve a system of linear congruences by applying the Chinese Remainder Theorem.



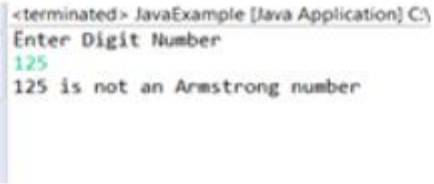
```
Enter k value
3
enter numbers
3 4 5
enter remainders
2 3 1
output=11

...Program finished with exit code 0
Press ENTER to exit console.
```

4.Armstrong Number

Write a Java Program to check whether the given number is Armstrong number or not



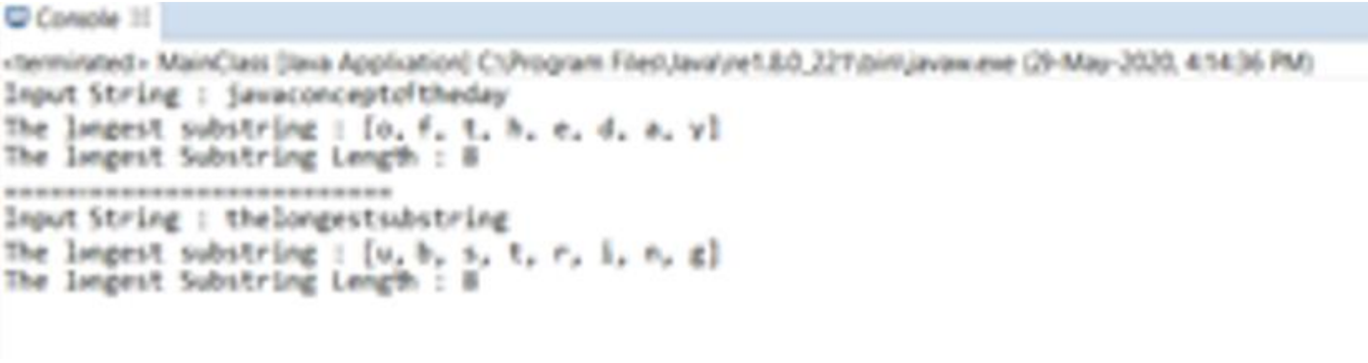
```
<terminated> JavaExample [Java Application] C:\
Enter Digit Number
371
371 is an Armstrong number
```



```
<terminated> JavaExample [Java Application] C:\
Enter Digit Number
125
125 is not an Armstrong number
```

5.Substring

Write a Java Program to find longest substring without repeating characters in a string.



```
<terminated> MainClass [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (29-May-2020, 4:14:36 PM)
Input String : javaconceptoftheday
The longest substring : [o, f, t, h, e, d, a, y]
The longest Substring Length : 8
==========================
Input String : thelongestsubstring
The longest substring : [u, b, s, t, r, i, n, g]
The longest Substring Length : 8
```