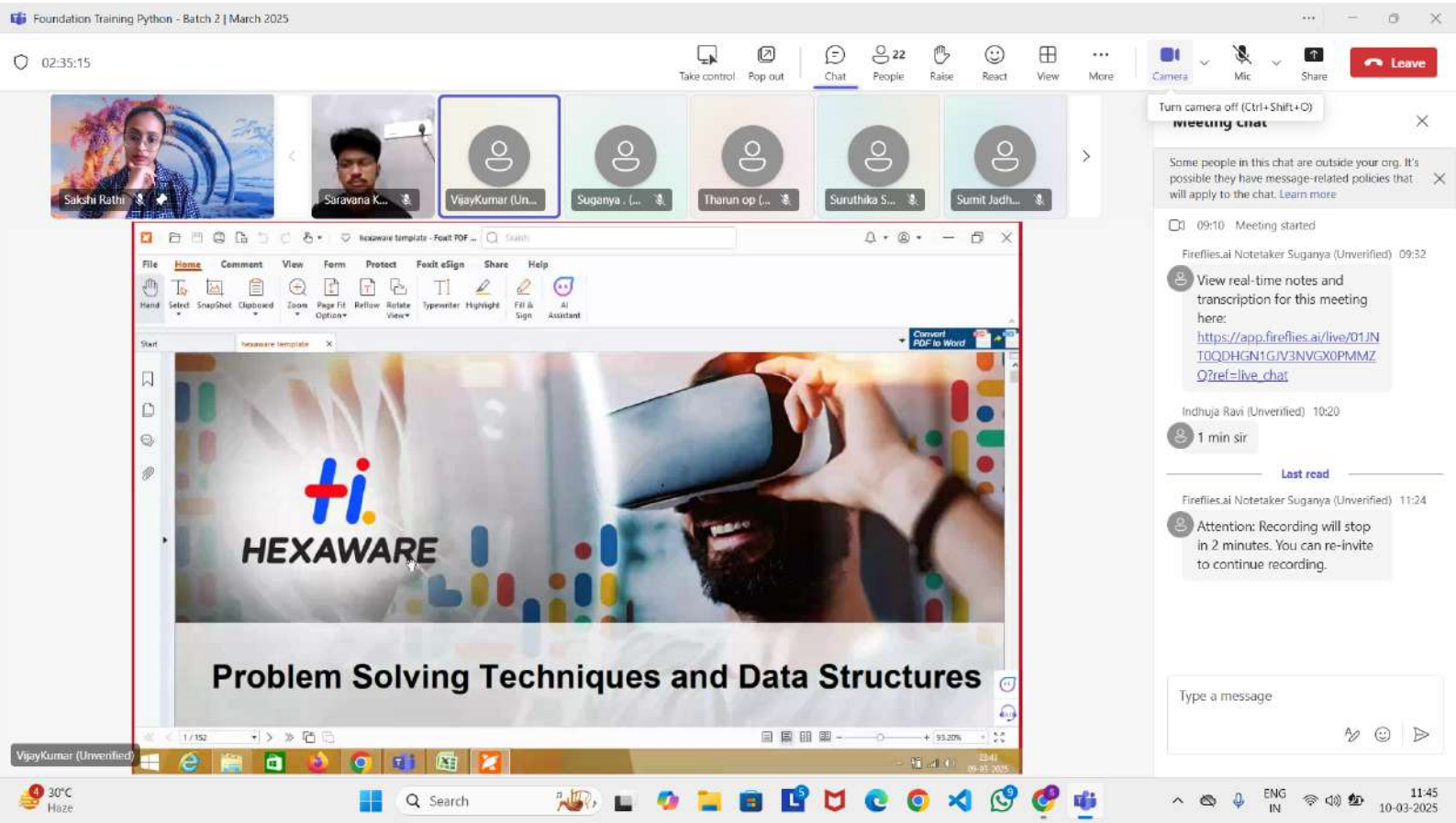
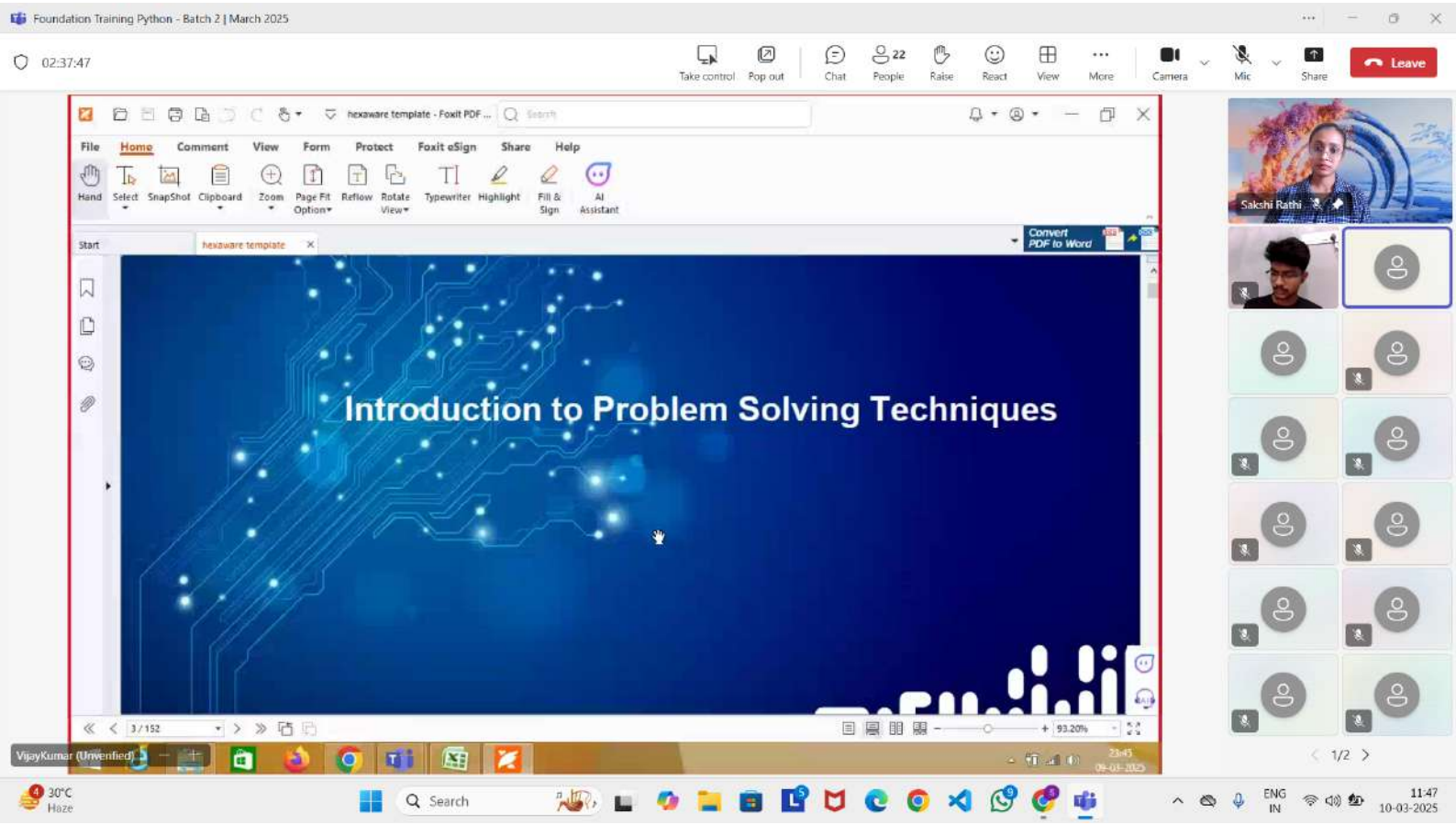
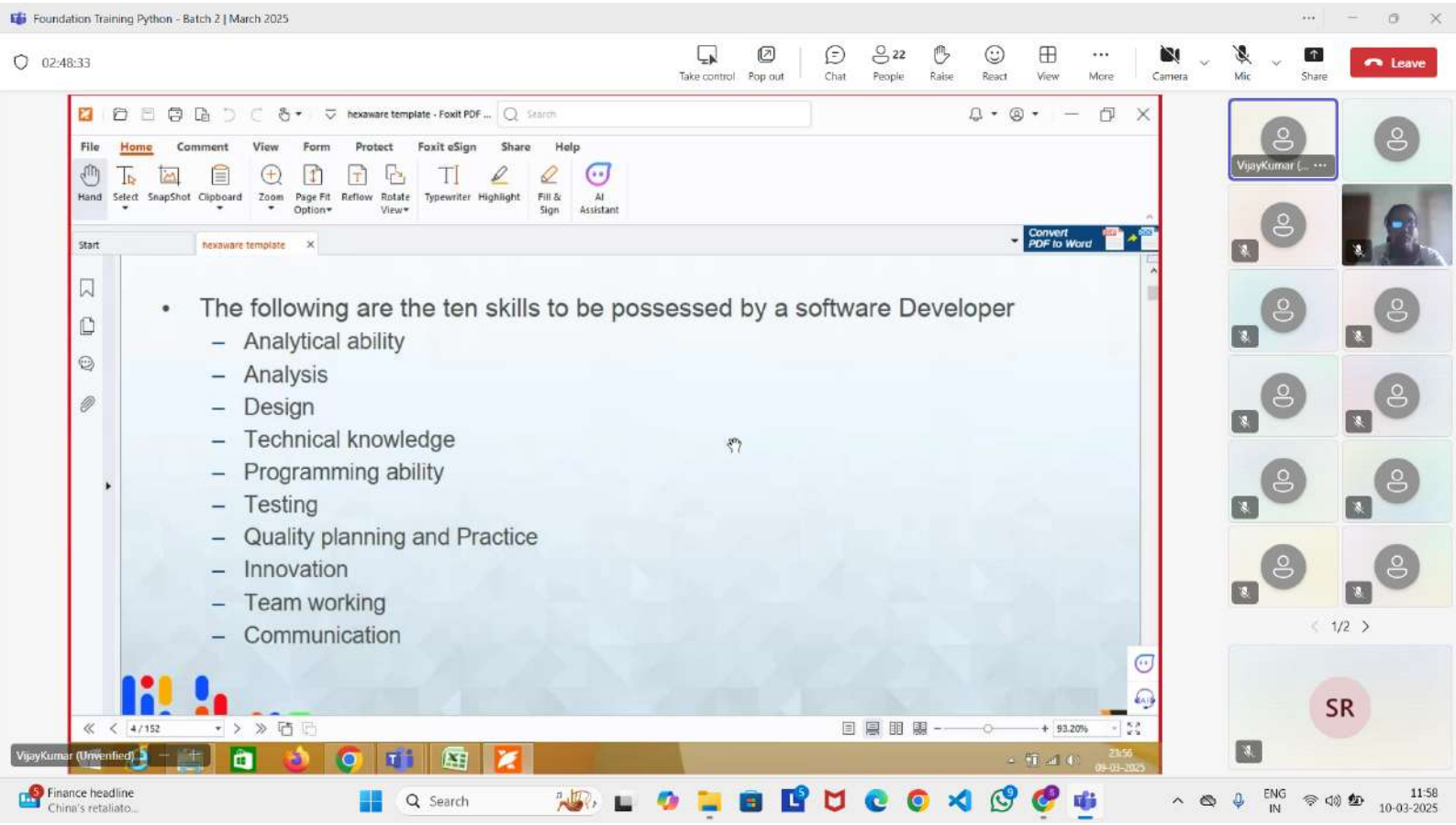
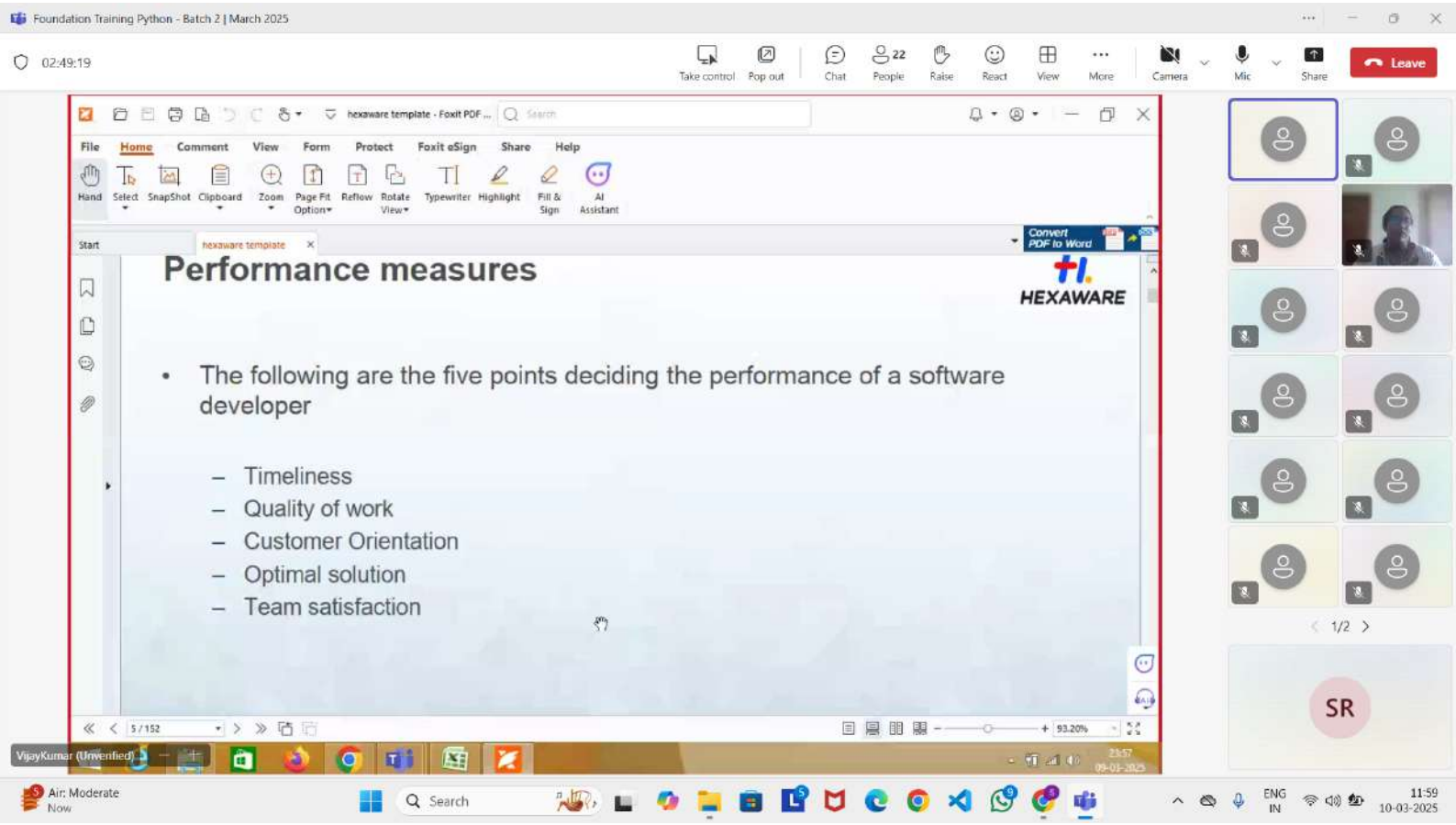
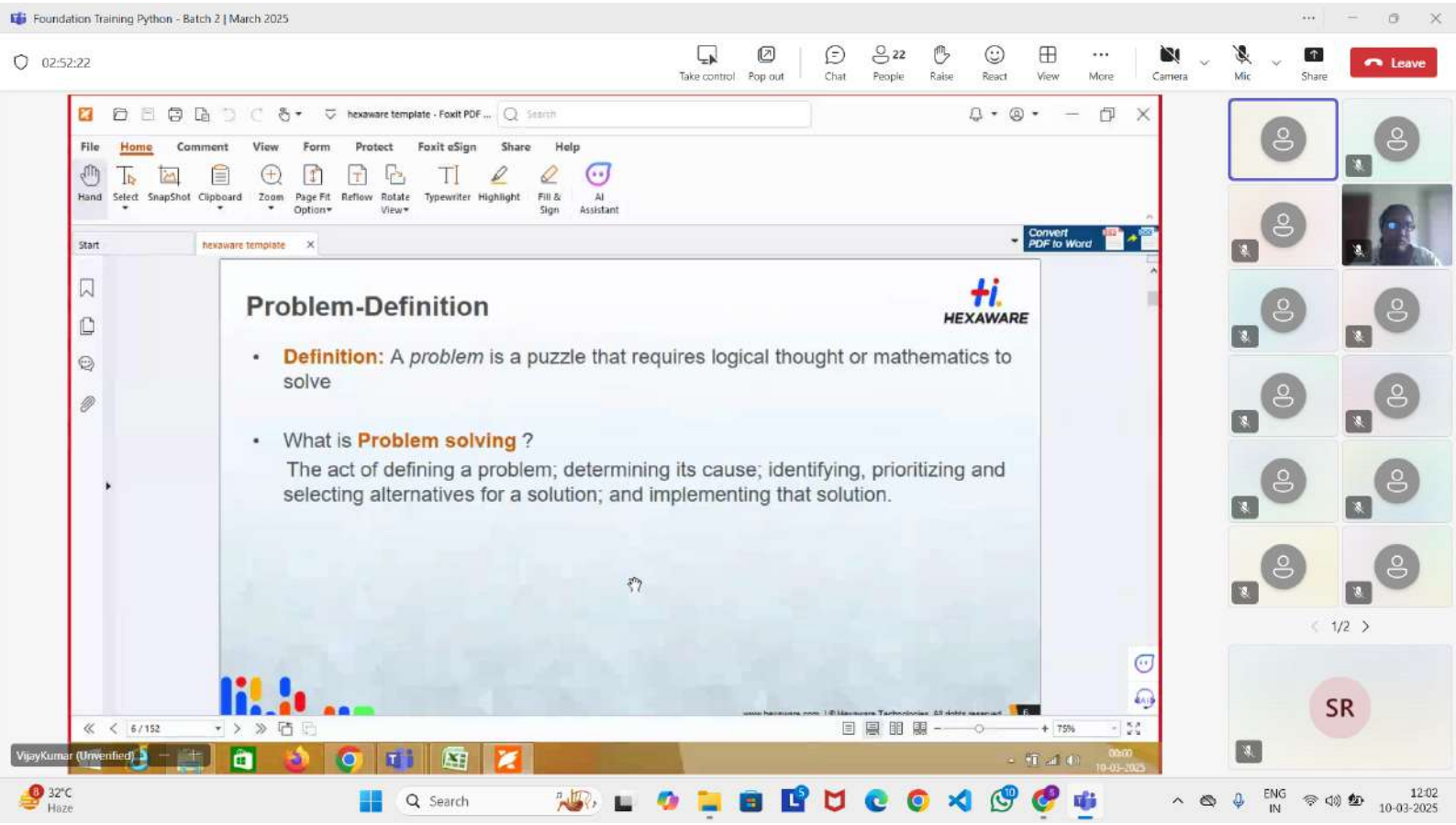
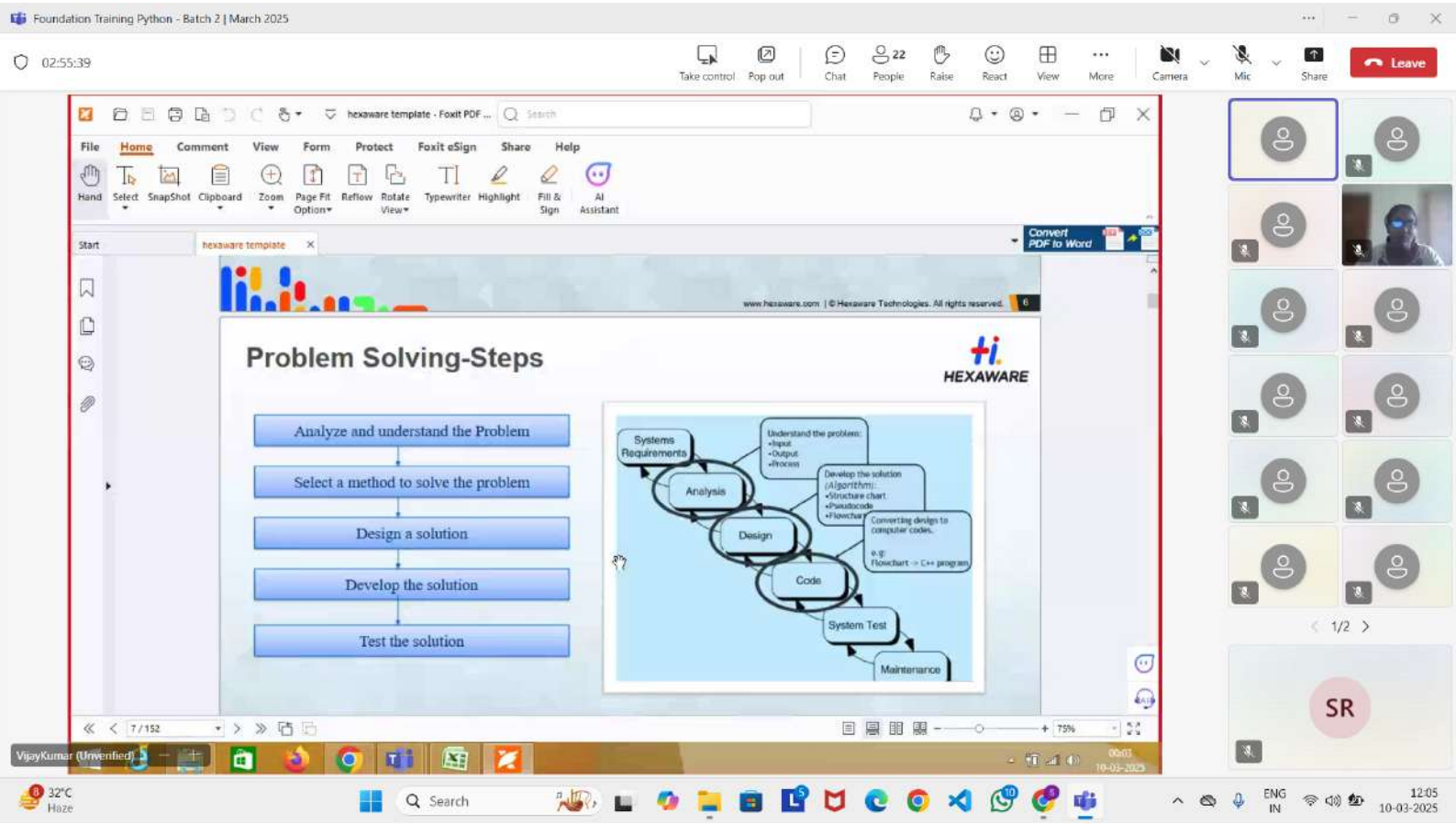

Foundation Training Python - Batch 2 | March 2025
02:35:15
Take control
Pop out
Chat
People
22
Raise
React
View
More
Camera
Mic
Share
Leave
Turn camera off (Ctrl+Shift+O)
Sakshi Rathi
Saravana K...
VijayKumar (Un...
Suganya . (...
Tharun op (...
Suruthika S...
Sumit Jadh...
Meeting chat
Some people in this chat are outside your org. It's possible they have message-related policies that will apply to the chat. Learn more
09:10 Meeting started
Fireflies.ai Notetaker Suganya (Unverified) 09:32
View real-time notes and transcription for this meeting here: https://app.fireflies.ai/live/01JNT0QDHGN1GJV3NVGX0PMMZQ?ref=live_chat
Indhuja Ravi (Unverified) 10:20
1 min sir
Last read
Fireflies.ai Notetaker Suganya (Unverified) 11:24
Attention: Recording will stop in 2 minutes. You can re-invite to continue recording.
Type a message
HEXAWARE
Problem Solving Techniques and Data Structures
VijayKumar (Unverified)
30°C
Haze
Search
ENG
IN
11:45
10-03-2025

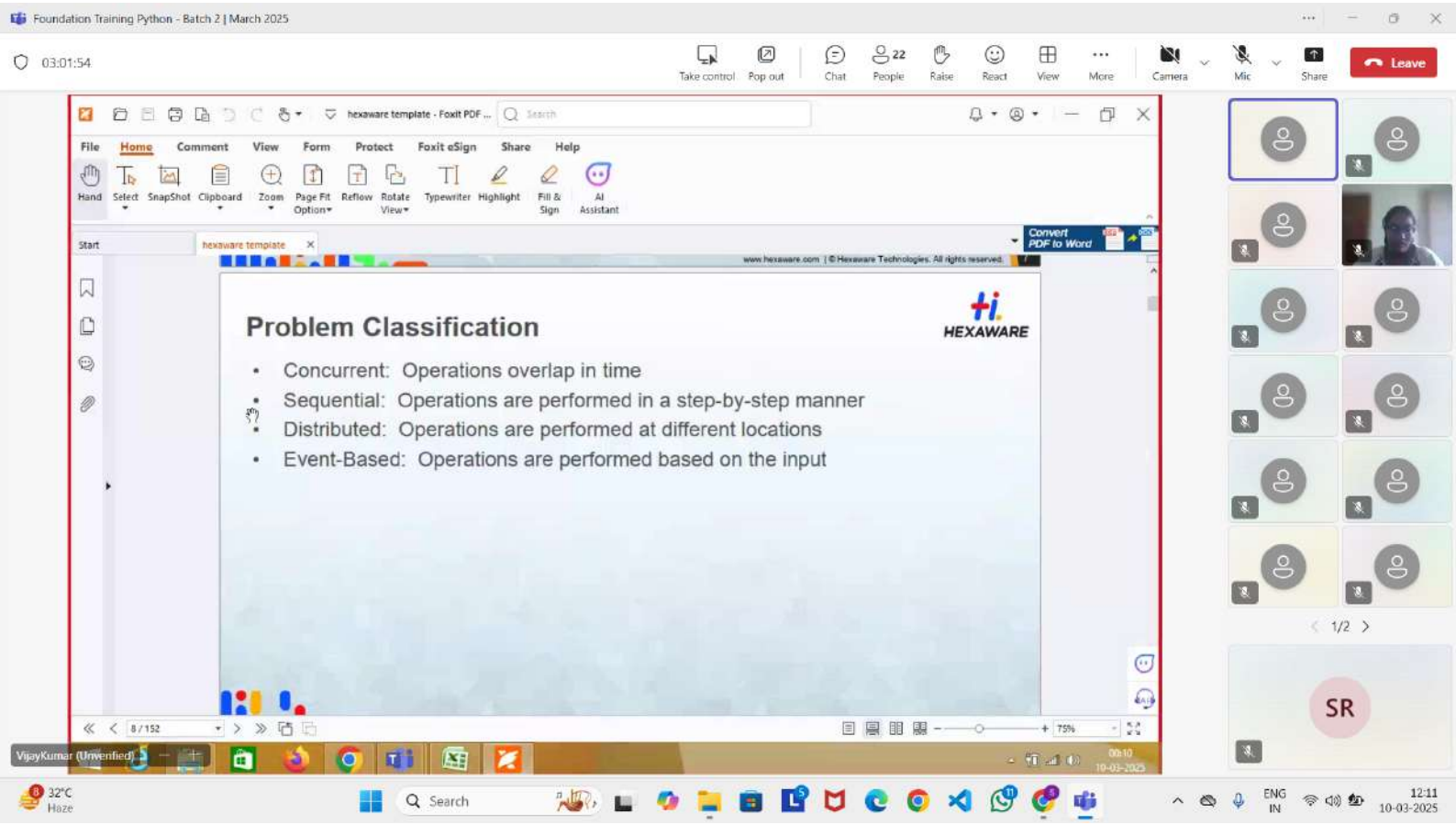

Foundation Training Python - Batch 2 | March 2025
02:37:47
Take control
Pop out
Chat
People
22
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Introduction to Problem Solving Techniques
3 / 152
93.20%
Sakshi Rathi
1/2
VijayKumar (Unverified)
30°C
Haze
Search
ENG
IN
11:47
10-03-2025

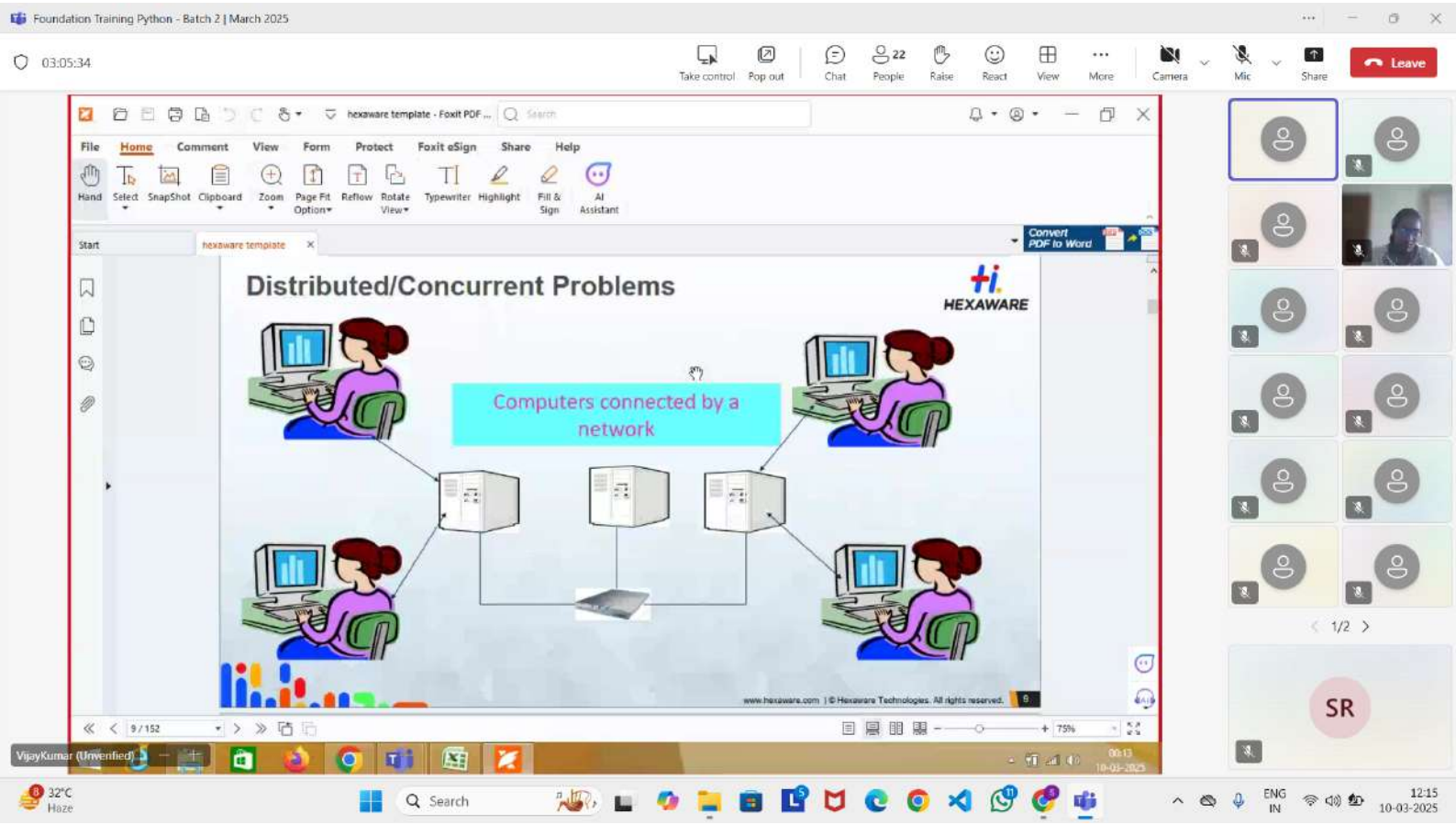

Foundation Training Python - Batch 2 | March 2025
02:48:33
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
The following are the ten skills to be possessed by a software Developer
Analytical ability
Analysis
Design
Technical knowledge
Programming ability
Testing
Quality planning and Practice
Innovation
Team working
Communication
4 / 152
93.20%
VijayKumar (Unverified)
1/2
SR
Finance headline
China's retaliato...
Search
ENG
IN
11:58
10-03-2025


Foundation Training Python - Batch 2 | March 2025
02:49:19
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Performance measures
HEXAWARE
The following are the five points deciding the performance of a software developer
Timeliness
Quality of work
Customer Orientation
Optimal solution
Team satisfaction
5 / 152
93.20%
1/2
SR
VijayKumar (Unverified)
Air: Moderate
Now
Search
ENG
IN
11:59
10-03-2025


Foundation Training Python - Batch 2 | March 2025
02:52:22
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Problem-Definition
HEXAWARE
Definition: A problem is a puzzle that requires logical thought or mathematics to solve
What is Problem solving ?
The act of defining a problem; determining its cause; identifying, prioritizing and selecting alternatives for a solution; and implementing that solution.
6 / 152
75%
1/2
SR
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:02
10-03-2025


Foundation Training Python - Batch 2 | March 2025
02:55:39
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
www.hexaware.com | © Hexaware Technologies. All rights reserved.
6
Problem Solving-Steps
HEXAWARE
Analyze and understand the Problem
Select a method to solve the problem
Design a solution
Develop the solution
Test the solution
Systems Requirements
Understand the problem:
•Input
•Output
•Process
Analysis
Develop the solution (Algorithm):
•Structure chart
•Pseudocode
•Flowchart
Design
Converting design to computer codes.
e.g: flowchart -> C++ program
Code
System Test
Maintenance
7 / 152
75%
VijayKumar (Unverified)
1/2
SR
32°C
Haze
Search
ENG
IN
12:05
10-03-2025


Foundation Training Python - Batch 2 | March 2025
03:01:54
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
www.hexaware.com | © Hexaware Technologies. All rights reserved.
Problem Classification
HEXAWARE
Concurrent: Operations overlap in time
Sequential: Operations are performed in a step-by-step manner
Distributed: Operations are performed at different locations
Event-Based: Operations are performed based on the input
8 / 152
75%
1/2
SR
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:11
10-03-2025


Foundation Training Python - Batch 2 | March 2025
03:05:34
Take control
Pop out
Chat
People
22
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Distributed/Concurrent Problems
HEXAWARE
Computers connected by a network
www.hexaware.com | © Hexaware Technologies. All rights reserved.
9 / 152
75%
1/2
SR
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:15
10-03-2025

Foundation Training Python - Batch 2 | March 2025

03:06:13

Take control | Pop out | Chat | People 22 | Raise | React | View | More | Camera | Mic | Share | Leave

hexaware template - Foxit PDF ...

File | Home | Comment | View | Form | Protect | Foxit eSign | Share | Help

Hand | Select | SnapShot | Clipboard | Zoom | Page Fit Option | Reflow | Rotate View | Typewriter | Highlight | Fill & Sign | AI Assistant

Start | hexaware template

Convert PDF to Word

Sequential/Event based-Example

HEXAWARE

10 / 152

75%

VijayKumar (Unverified)

1/2

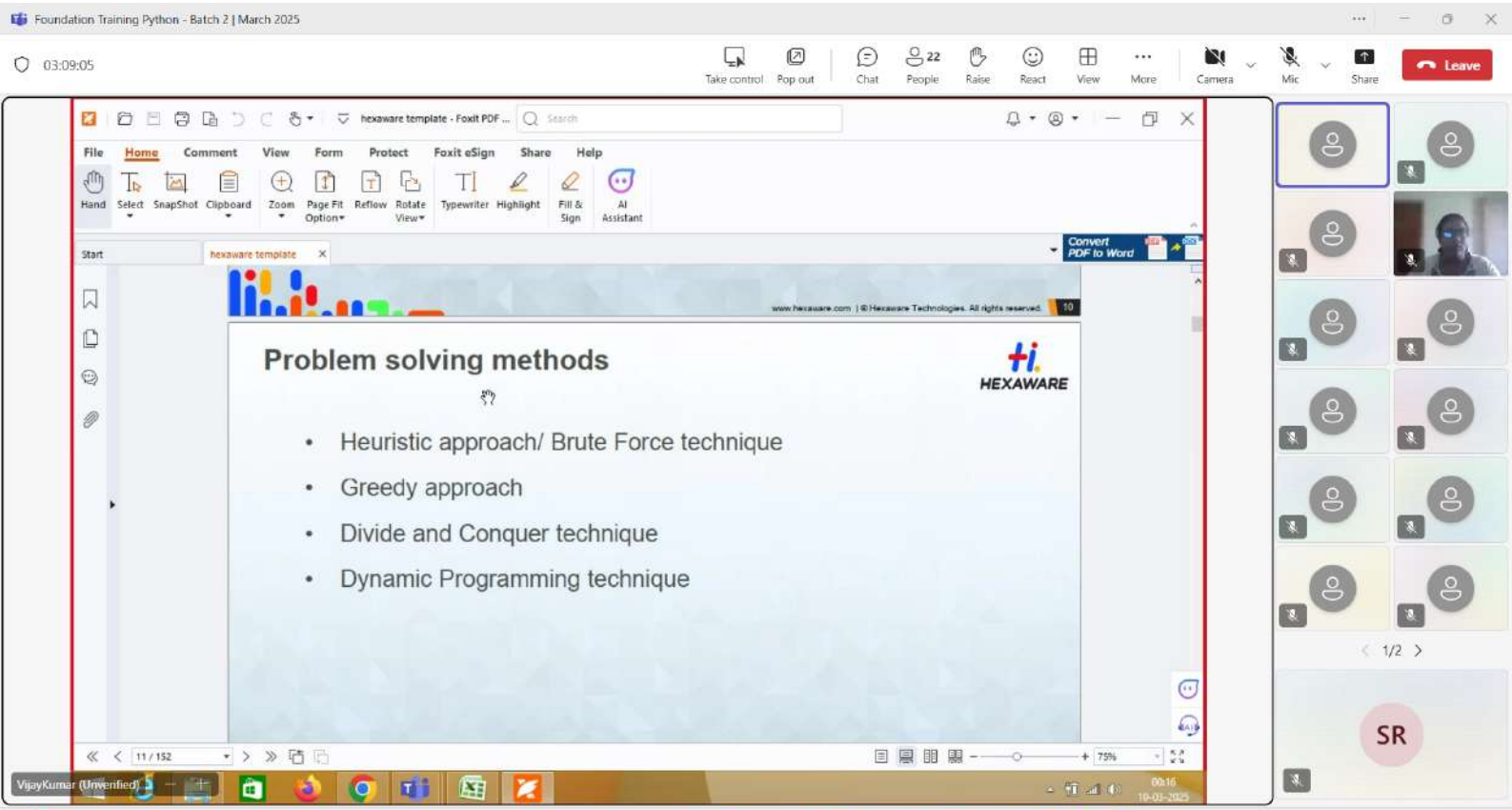
SR

32°C Haze

Search

ENG IN

12:16 10-03-2025


Foundation Training Python - Batch 2 | March 2025
03:09:05
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Problem solving methods
HEXAWARE
Heuristic approach/ Brute Force technique
Greedy approach
Divide and Conquer technique
Dynamic Programming technique
11 / 152
75%
1/2
SR
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:19
10-03-2025

Foundation Training Python - Batch 2 | March 2025

03:09:51

Take control | Pop out | Chat | People 22 | Raise | React | View | More | Camera | Mic | Share | Leave

hexaware template - Foxit PDF ...

File | Home | Comment | View | Form | Protect | Foxit eSign | Share | Help

Hand | Select | SnapShot | Clipboard | Zoom | Page Fit Option | Reflow | Rotate View | Typewriter | Highlight | Fill & Sign | AI Assistant

Start | hexaware template

Convert PDF to Word

 11

Heuristic/ Brute Force approach

HEXAWARE

- Brute force approach is a straight forward approach to solve the problem. It is directly based on the problem statement and the concepts
- Brute force is a simple but a very costly technique
- Example: Breaking Password

Watch the video to get more clarity on Heuristic

https://www.youtube.com/watch?v=ZiNodNt-33g

12 / 152 | 75%

1/2

SR

VijayKumar (Unverified)

32°C Haze | Search | ENG IN | 12:19 10-03-2025

Foundation Training Python - Batch 2 | March 2025

03:11:48

Take control | Pop out | Chat | People 22 | Raise | React | View | More | Camera | Mic | Share | Leave

hexaware template - Foxit PDF ...

File | Home | Comment | View | Form | Protect | Foxit eSign | Share | Help

Hand | Select | SnapShot | Clipboard | Zoom | Page Fit Option | Reflow | Rotate View | Typewriter | Highlight | Fill & Sign | AI Assistant

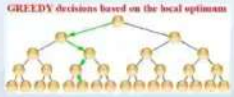
Start | hexaware template

Convert PDF to Word

Greedy Approach

HEXAWARE

- Greedy design technique is primarily used in Optimization problems
- The Greedy approach helps in constructing a solution for a problem through a sequence of steps where each step is considered to be a partial solution. This partial solution is extended progressively to get the complete solution
- The choice of each step in a greedy approach is done based on the following
  - It must be feasible
  - It must be locally optimal
  - It must be irrevocable
- Example: TSP- Traveling Salesman Problem
- https://www.youtube.com/watch?v=SC5CX8drAtU



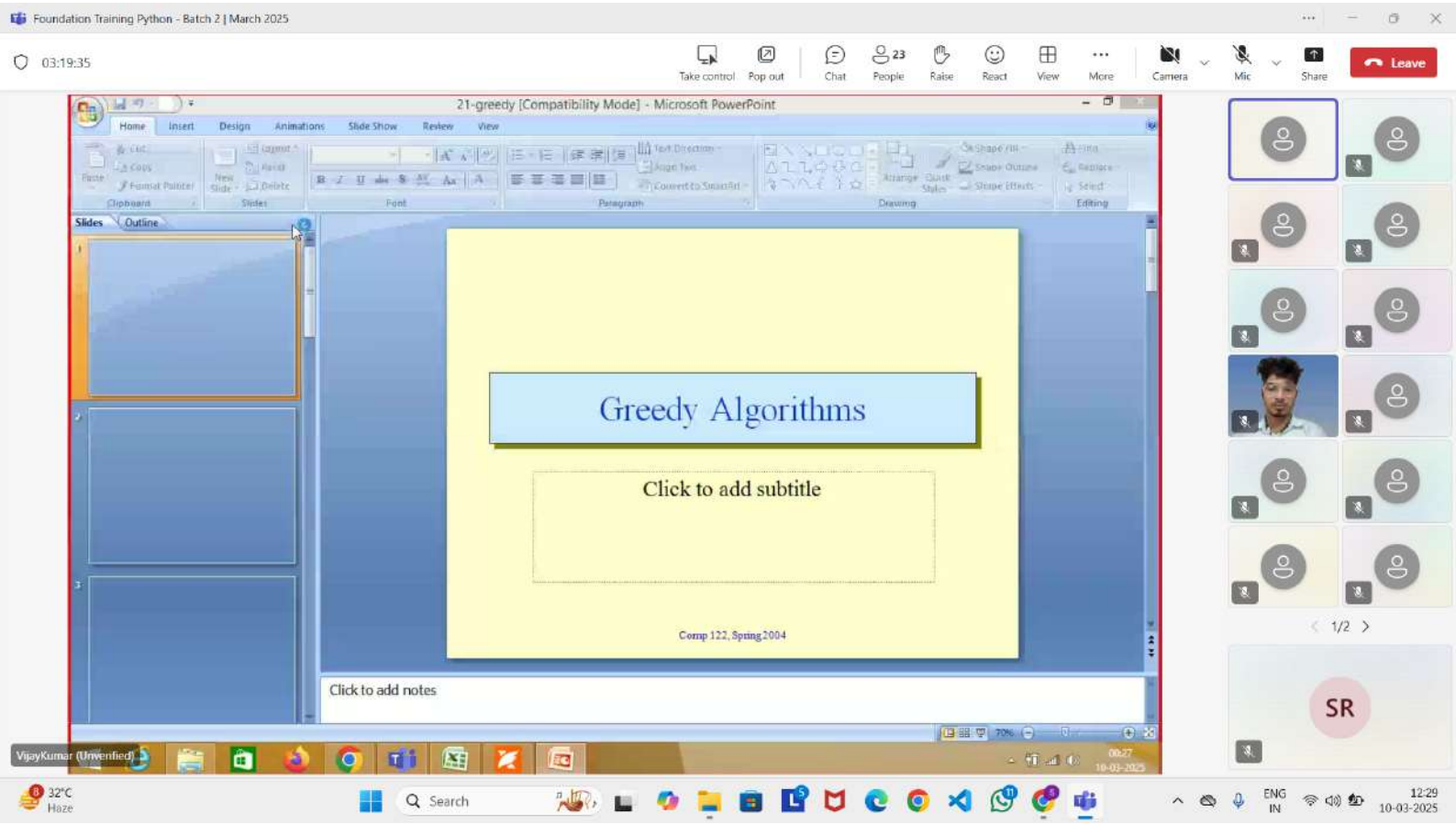
13 / 152 | 75%

VijayKumar (Unverified)

1/2

SR

32°C Haze | Search | ENG IN | 12:21 10-03-2025


Foundation Training Python - Batch 2 | March 2025
03:19:35
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
21-greedy [Compatibility Mode] - Microsoft PowerPoint
Home
Insert
Design
Animations
Slide Show
Review
View
Slides
Outline
Greedy Algorithms
Click to add subtitle
Comp 122, Spring 2004
Click to add notes
1/2
SR
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:29
10-03-2025

Foundation Training Python - Batch 2 | March 2025

03:21:34

Take control | Pop out | Chat | People 23 | Raise | React | View | More | Camera | Mic | Share | Leave

hexaware template - Foxit PDF ...

File Home Comment View Form Protect Foxit eSign Share Help

Hand | Select | SnapShot | Clipboard | Zoom | Page Fit Option | Reflow | Rotate View | Typewriter | Highlight | Fill & Sign | AI Assistant

Start | hexaware template

Convert PDF to Word

Divide-and-Conquer

HEXAWARE

The most-well known algorithm design strategy:

1. Divide instance of problem into two or more smaller instances
2. Solve smaller instances recursively
3. Obtain solution to original (larger) instance by combining these solutions

Example:

- Binary Search

https://www.youtube.com/watch?v=wVPCT1VjySA

Divide and Conquer

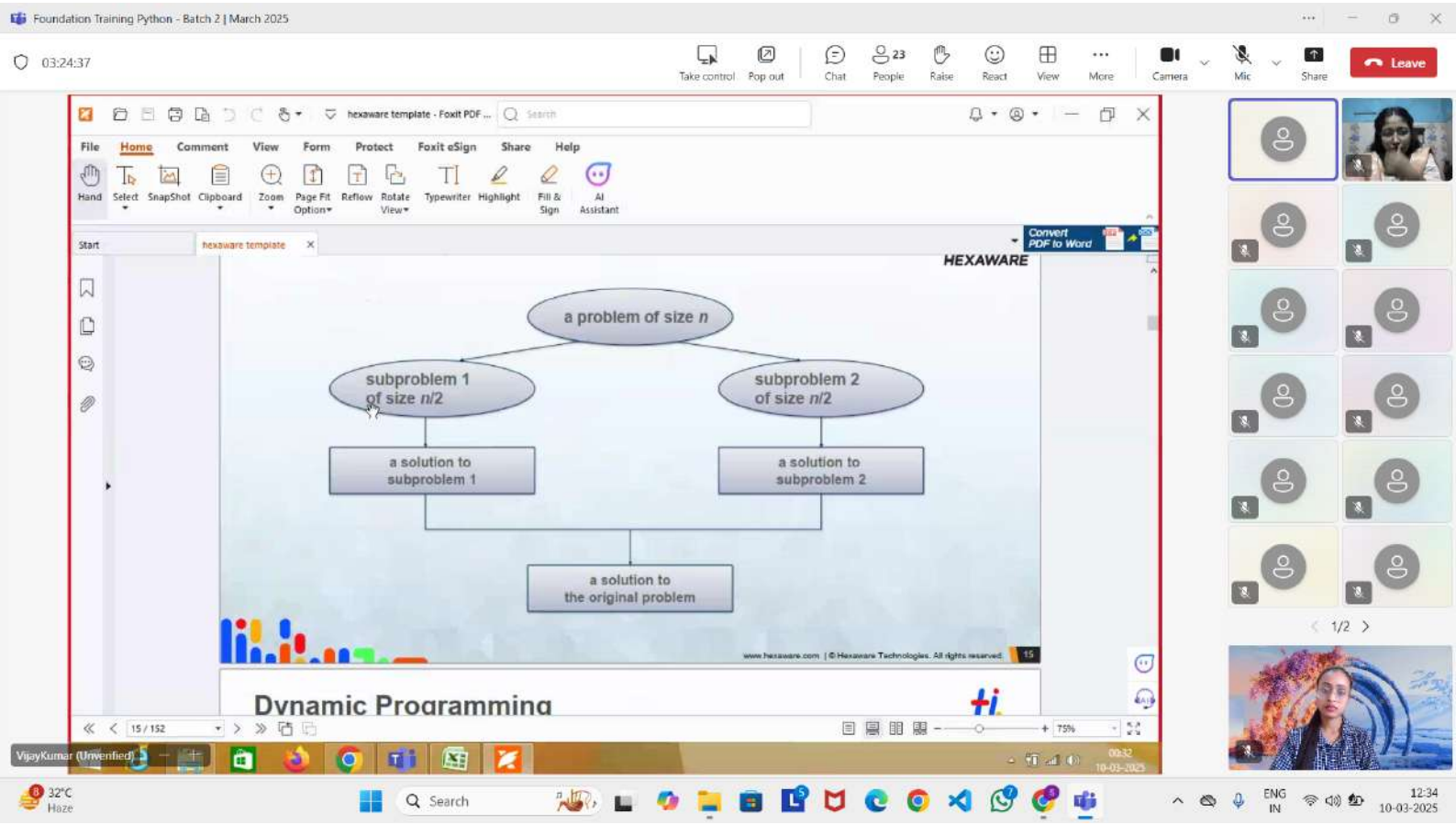
 14

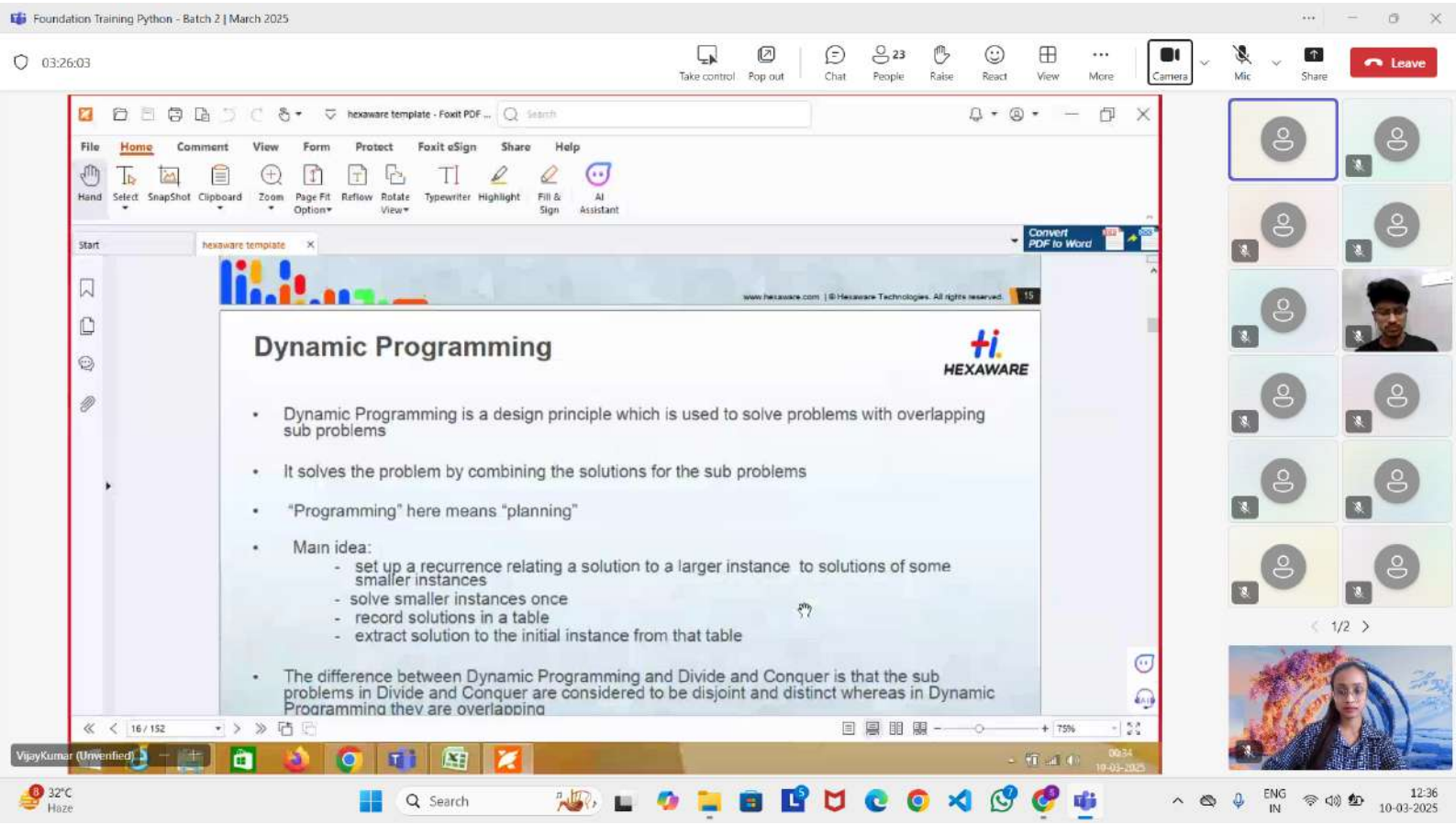
14 / 152 | 75%

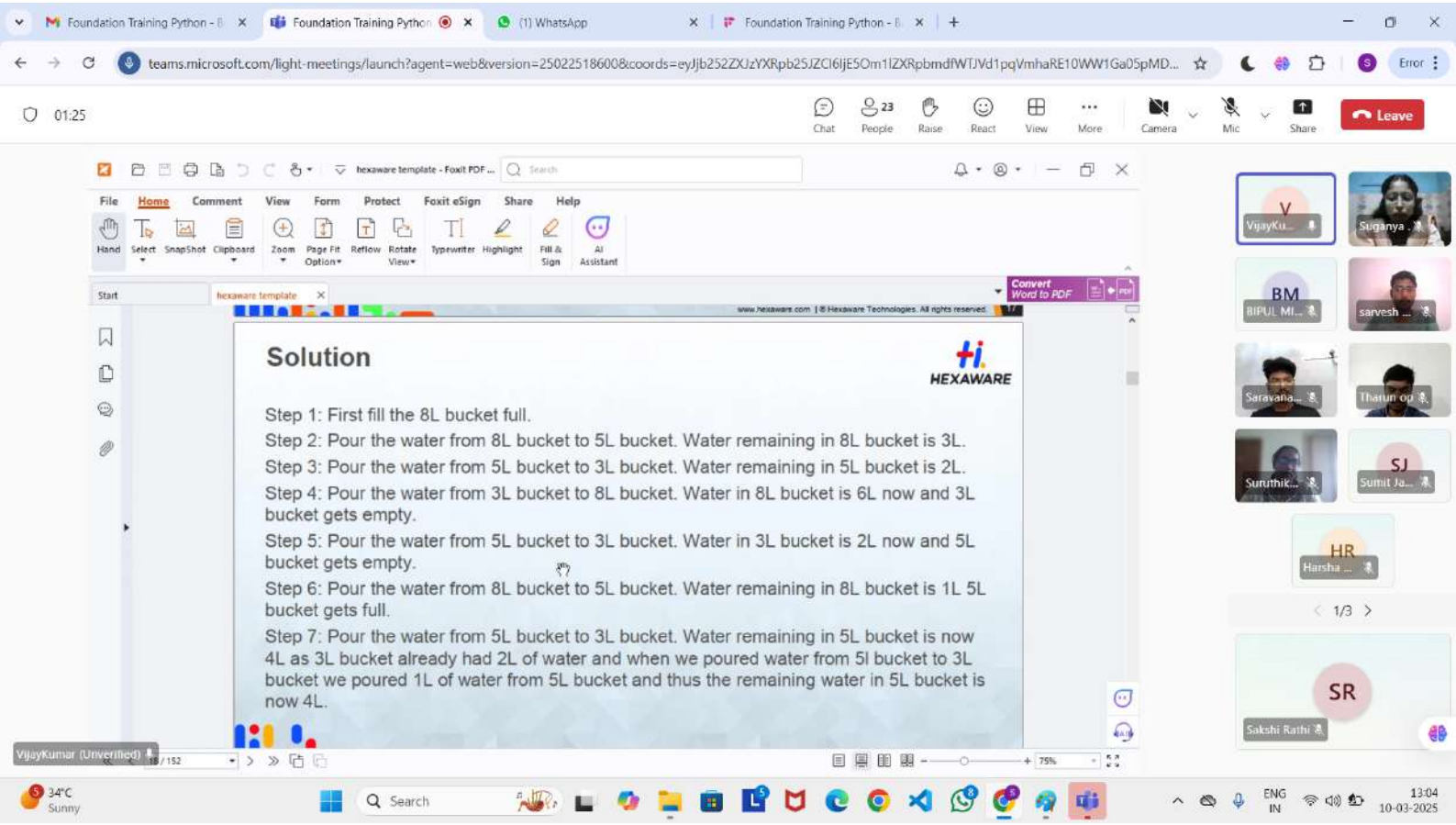
1/2

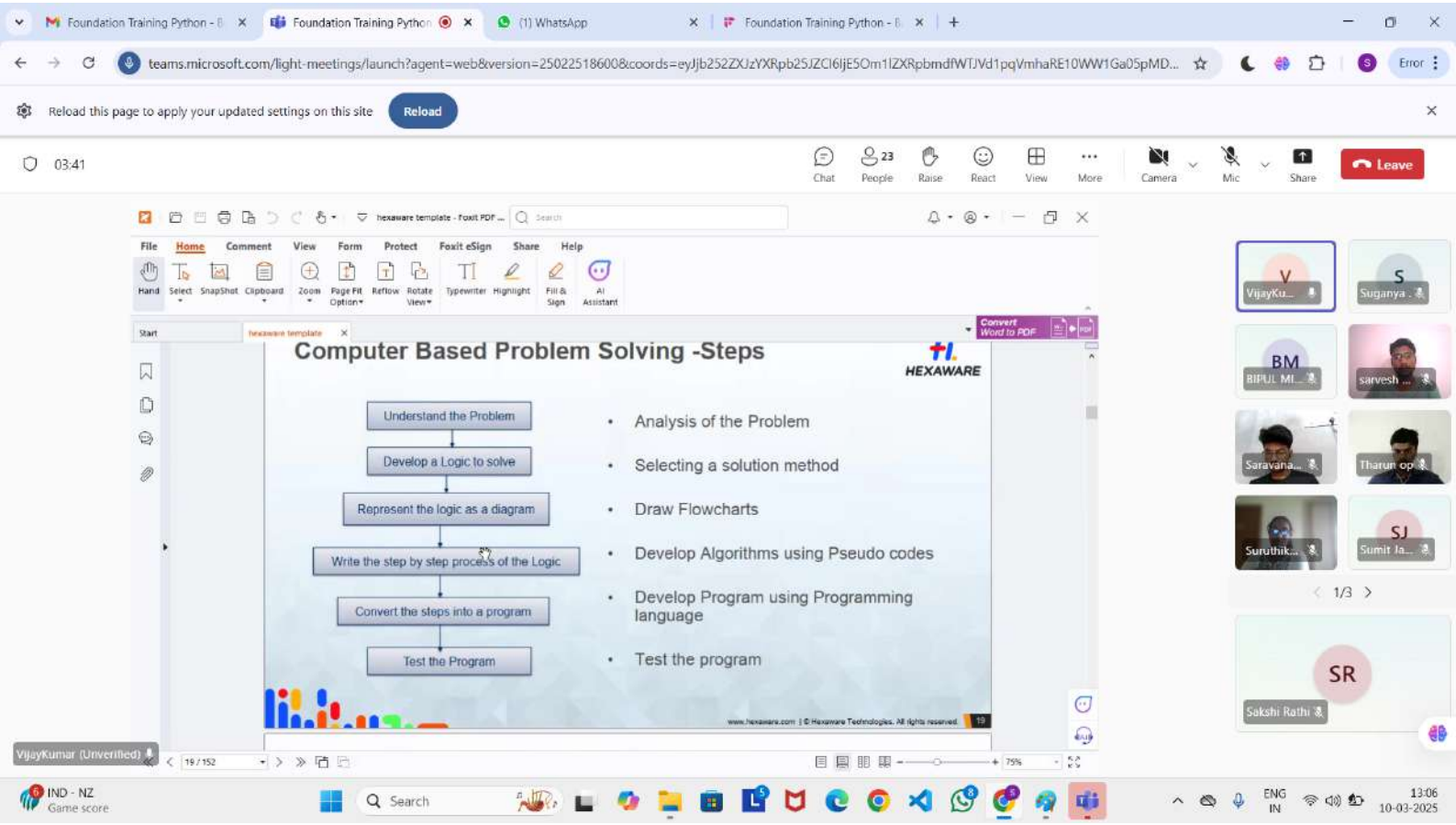
VijayKumar (Unverified)

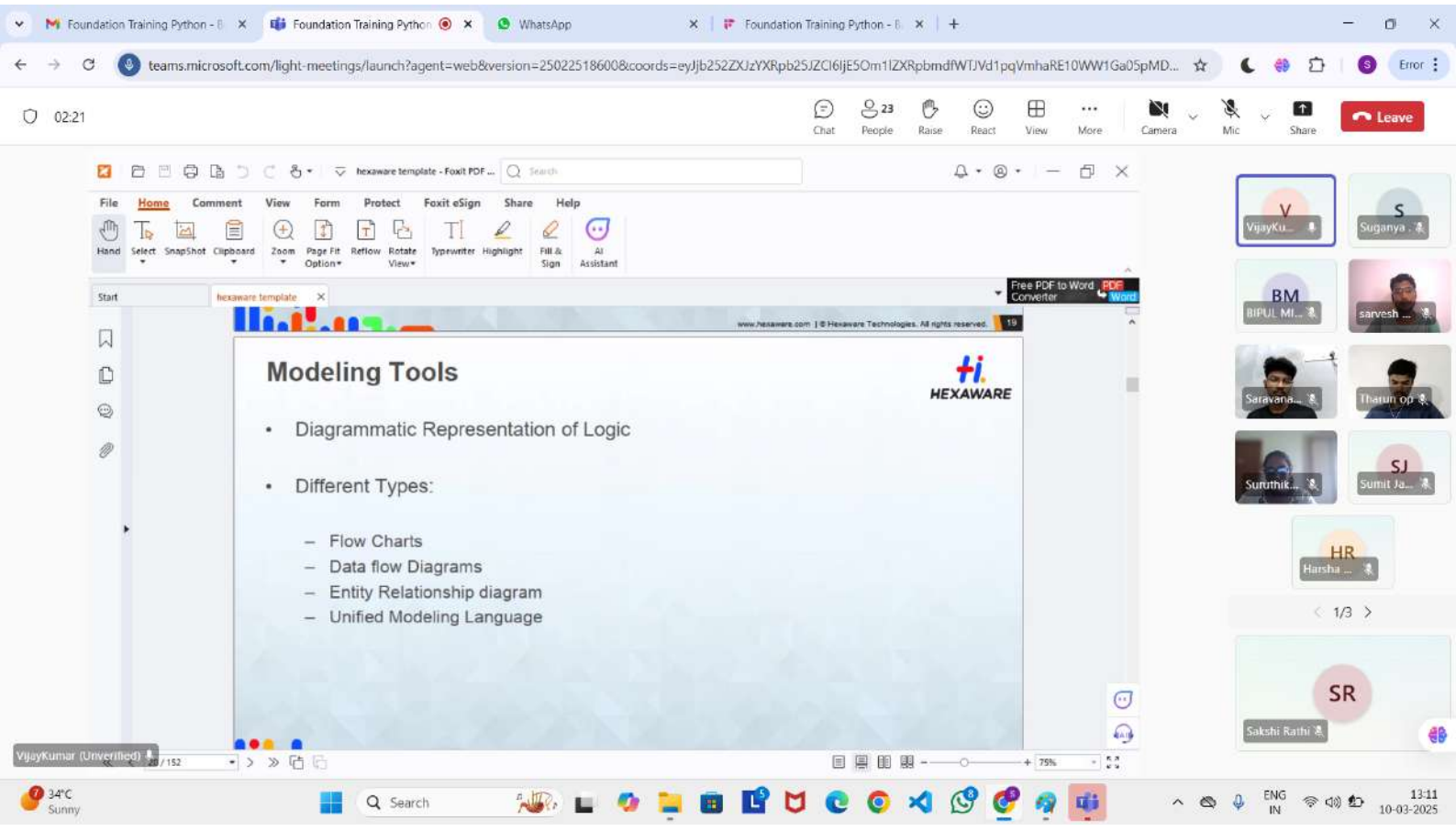
32°C Haze | Search | ENG IN | 12:31 10-03-2025

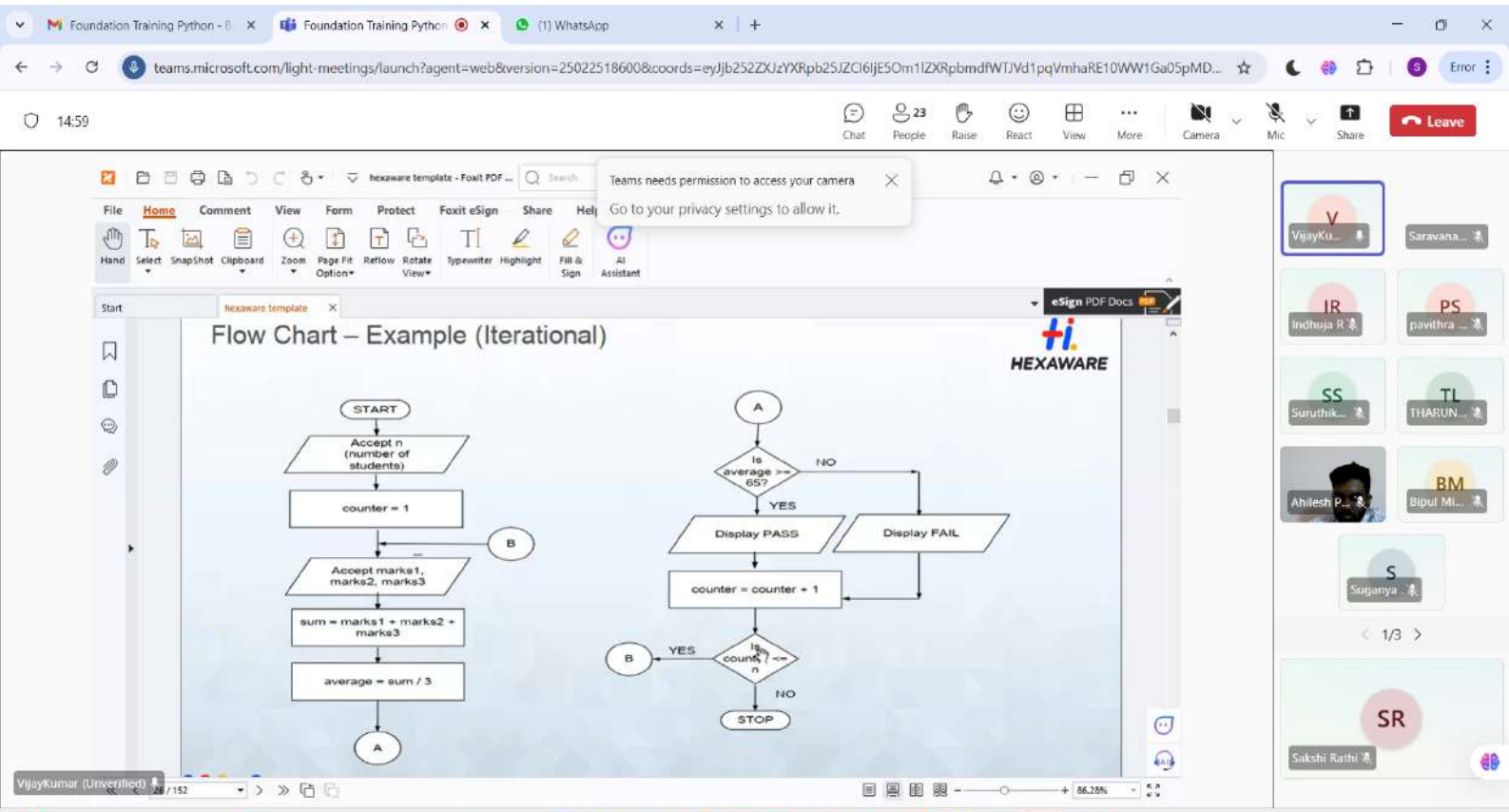

Foundation Training Python - Batch 2 | March 2025
03:24:37
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
HEXAWARE
a problem of size n
subproblem 1 of size n/2
subproblem 2 of size n/2
a solution to subproblem 1
a solution to subproblem 2
a solution to the original problem
www.hexaware.com | © Hexaware Technologies. All rights reserved.
15
Dynamic Programming
15 / 152
75%
1/2
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:34
10-03-2025

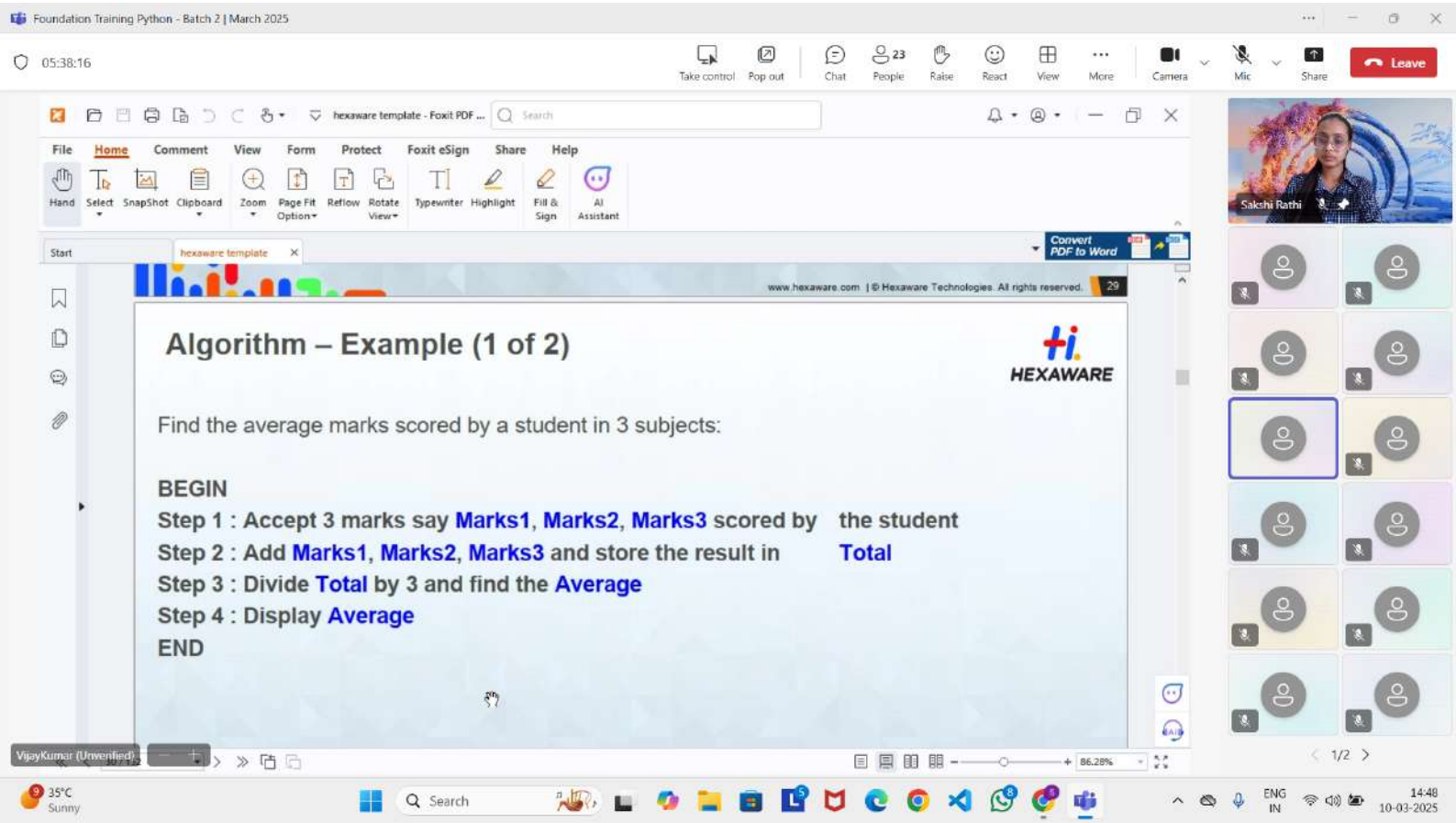

Foundation Training Python - Batch 2 | March 2025
03:26:03
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Dynamic Programming
HEXAWARE
Dynamic Programming is a design principle which is used to solve problems with overlapping sub problems
It solves the problem by combining the solutions for the sub problems
"Programming" here means "planning"
Main idea:
set up a recurrence relating a solution to a larger instance to solutions of some smaller instances
solve smaller instances once
record solutions in a table
extract solution to the initial instance from that table
The difference between Dynamic Programming and Divide and Conquer is that the sub problems in Divide and Conquer are considered to be disjoint and distinct whereas in Dynamic Programming they are overlapping
16 / 152
75%
1/2
VijayKumar (Unverified)
32°C
Haze
Search
ENG
IN
12:36
10-03-2025

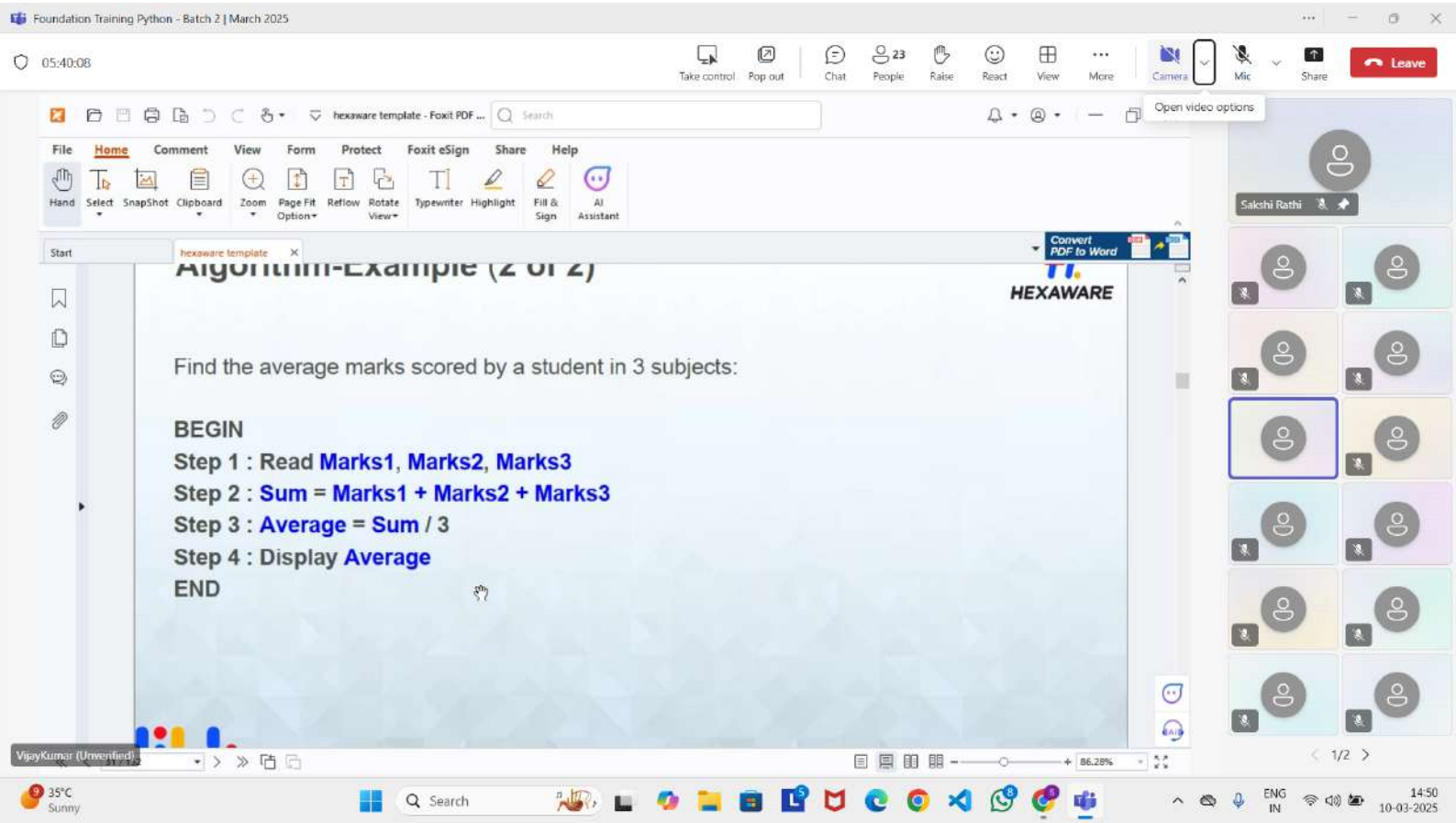

Foundation Training Python - 8
Foundation Training Python
(1) WhatsApp
Foundation Training Python - 8
teams.microsoft.com/light-meetings/launch?agent=web&version=25022518600&coords=eyJjb252ZXJzYXRpb25JZCI6IjE5Om1lZXRpbmdfWTJVd1pqVmhaRE10WW1Ga05pMD...
01:25
Chat
People
23
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert Word to PDF
www.hexaware.com | © Hexaware Technologies. All rights reserved.
Solution
HEXAWARE
Step 1: First fill the 8L bucket full.
Step 2: Pour the water from 8L bucket to 5L bucket. Water remaining in 8L bucket is 3L.
Step 3: Pour the water from 5L bucket to 3L bucket. Water remaining in 5L bucket is 2L.
Step 4: Pour the water from 3L bucket to 8L bucket. Water in 8L bucket is 6L now and 3L bucket gets empty.
Step 5: Pour the water from 5L bucket to 3L bucket. Water in 3L bucket is 2L now and 5L bucket gets empty.
Step 6: Pour the water from 8L bucket to 5L bucket. Water remaining in 8L bucket is 1L 5L bucket gets full.
Step 7: Pour the water from 5L bucket to 3L bucket. Water remaining in 5L bucket is now 4L as 3L bucket already had 2L of water and when we poured water from 5l bucket to 3L bucket we poured 1L of water from 5L bucket and thus the remaining water in 5L bucket is now 4L.
VijayKumar (Unverified)
75%
VijayKu...
Suganya ...
BM
BIPUL MI...
sarvesh ...
Saravana...
Tharun op
Suruthik...
SJ
Sumit Ja...
HR
Harsha ...
1/3
SR
Sakshi Rathi
34°C
Sunny
Search
ENG
IN
13:04
10-03-2025

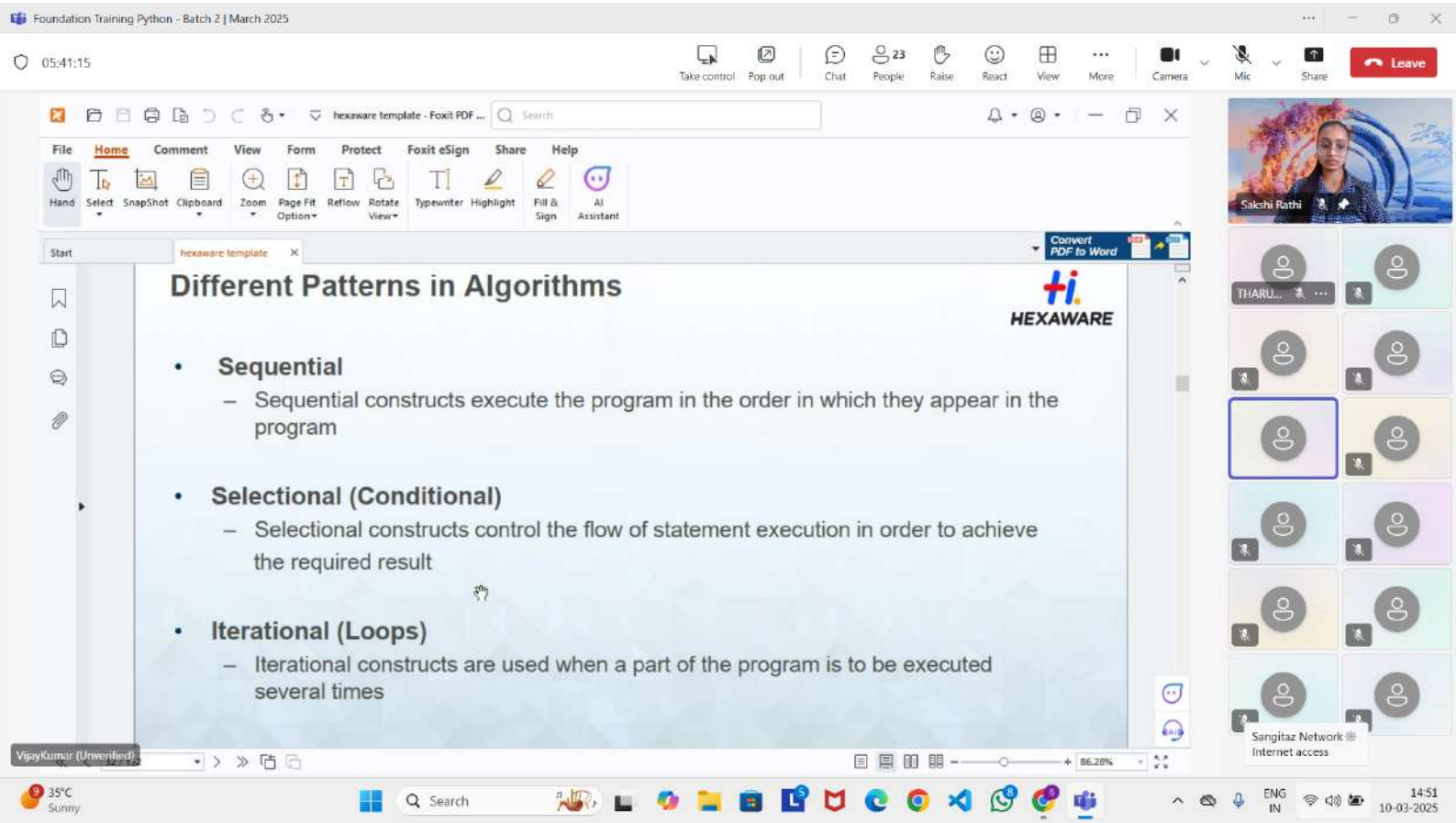

Foundation Training Python - B
Foundation Training Python - B
(1) WhatsApp
Foundation Training Python - B
teams.microsoft.com/light-meetings/launch?agent=web&version=25022518600&coords=eyJjb252ZXJzYXRpb25JZCI6IjE5Om1lZXRpbmdfWTJVd1pqVmhaRE10WW1Ga05pMD...
Reload this page to apply your updated settings on this site
Reload
03:41
Chat
People
23
Raise
React
View
More
Camera
Mic
Share
Leave
Computer Based Problem Solving -Steps
HEXAWARE
Understand the Problem
Develop a Logic to solve
Represent the logic as a diagram
Write the step by step process of the Logic
Convert the steps into a program
Test the Program
Analysis of the Problem
Selecting a solution method
Draw Flowcharts
Develop Algorithms using Pseudo codes
Develop Program using Programming language
Test the program
VijayKu...
Suganya ...
BIPUL MI...
sarvesh ...
Saravana...
Tharun op...
Suruthik...
Sumit Ja...
1/3
SR
Sakshi Rathi
VijayKumar (Unverified)
IND - NZ
Game score
Search
ENG
IN
13:06
10-03-2025

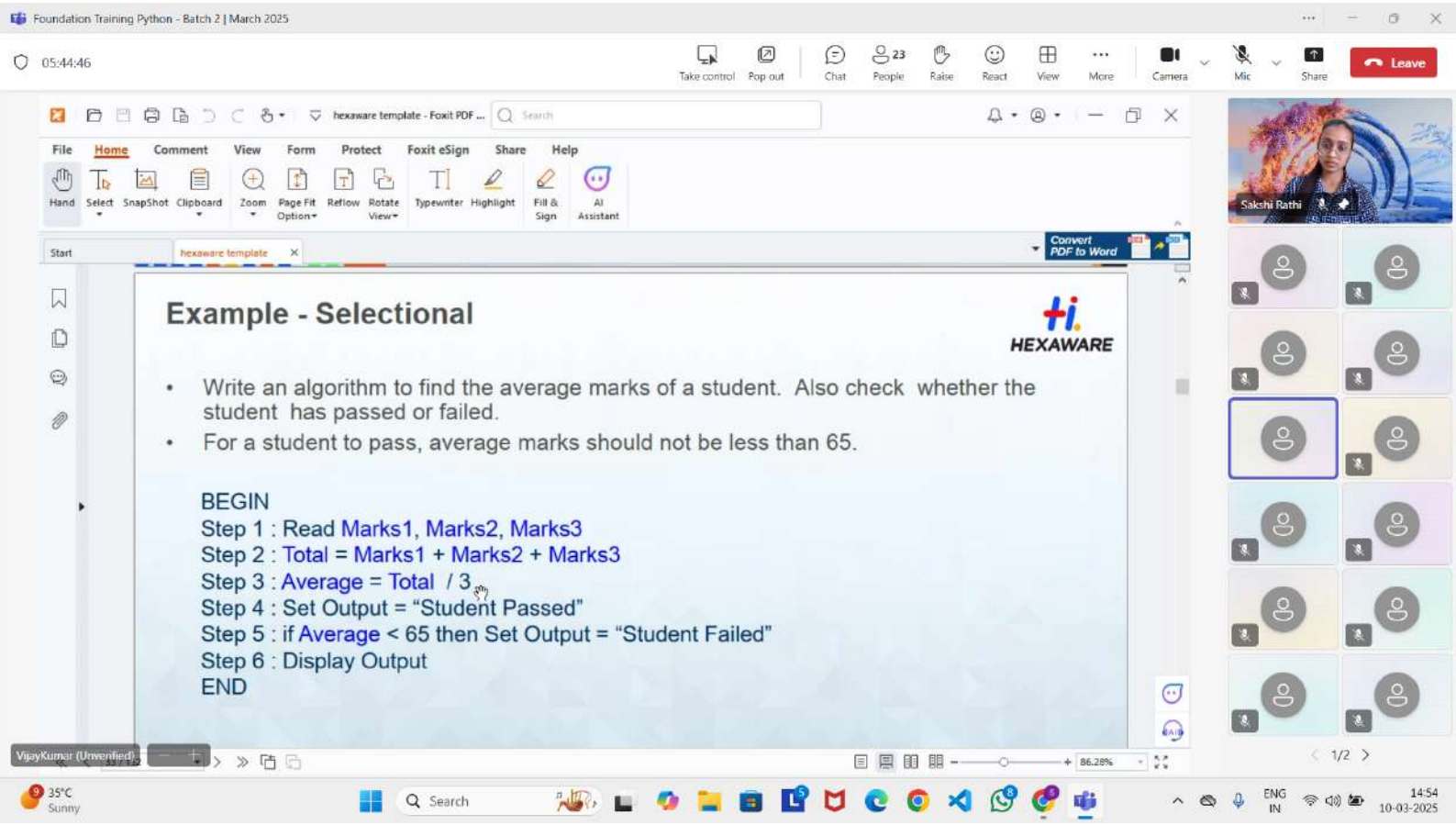

Foundation Training Python - B
Foundation Training Python
WhatsApp
Foundation Training Python - B
teams.microsoft.com/light-meetings/launch?agent=web&version=25022518600&coords=eyJjb252ZXJzYXRpb25JZCI6IjE5Om1lZXRpbmdfWTJVd1pqVmhaRE10WW1Ga05pMD...
02:21
Chat
People
23
Raise
React
View
More
Camera
Mic
Share
Leave
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Free PDF to Word Converter
Modeling Tools
HEXAWARE
Diagrammatic Representation of Logic
Different Types:
Flow Charts
Data flow Diagrams
Entity Relationship diagram
Unified Modeling Language
VijayKumar (Unverified)
1/3
SR
Sakshi Rathi
34°C
Sunny
Search
ENG
IN
13:11
10-03-2025

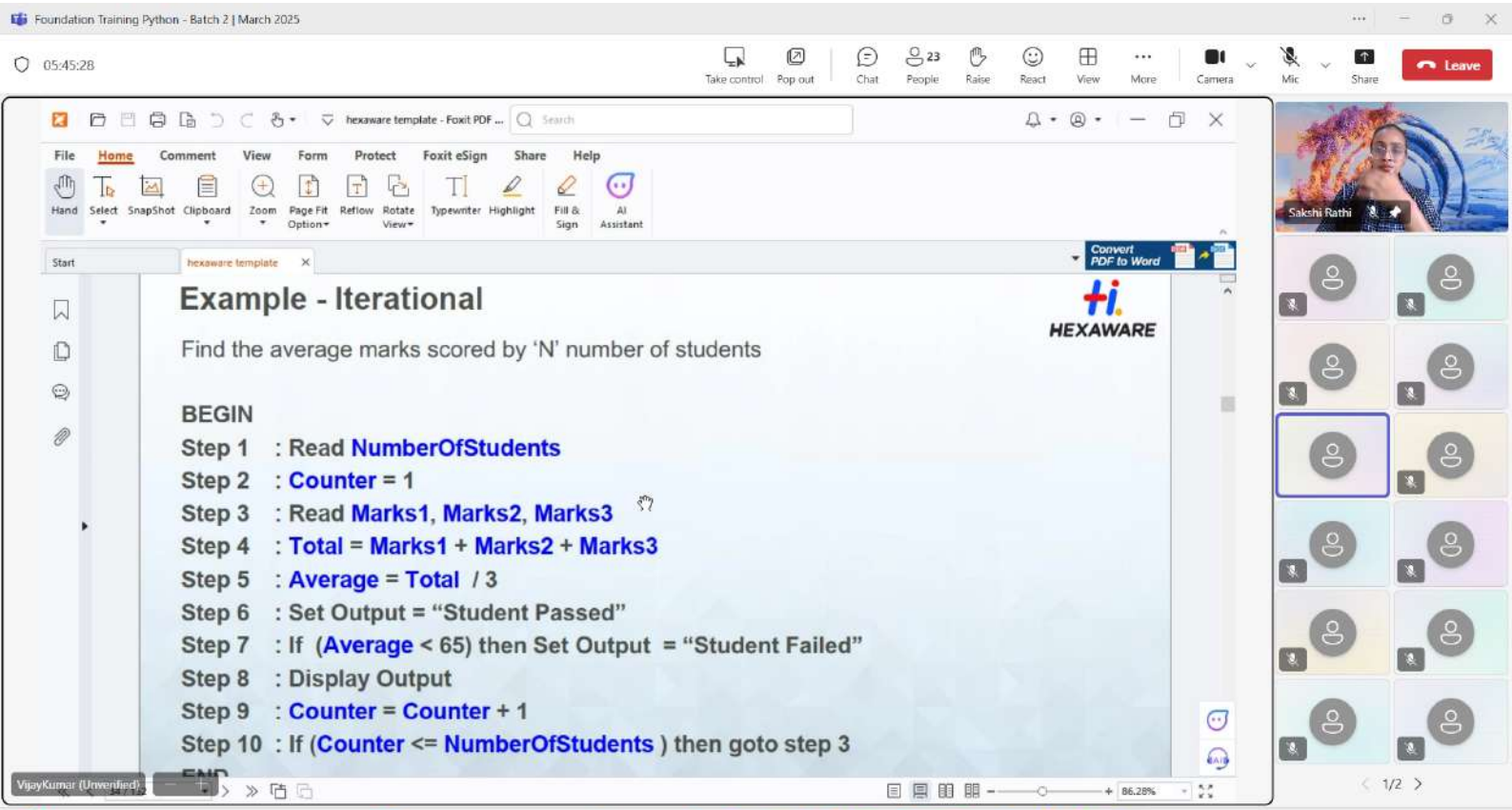

Flow Chart – Example (Iterational)
HEXAWARE
START
Accept n (number of students)
counter = 1
B
Accept marks1, marks2, marks3
sum = marks1 + marks2 + marks3
average = sum / 3
A
A
Is average >= 65?
NO
YES
Display PASS
Display FAIL
counter = counter + 1
Is counter <= n
YES
B
NO
STOP
Teams needs permission to access your camera
Go to your privacy settings to allow it.

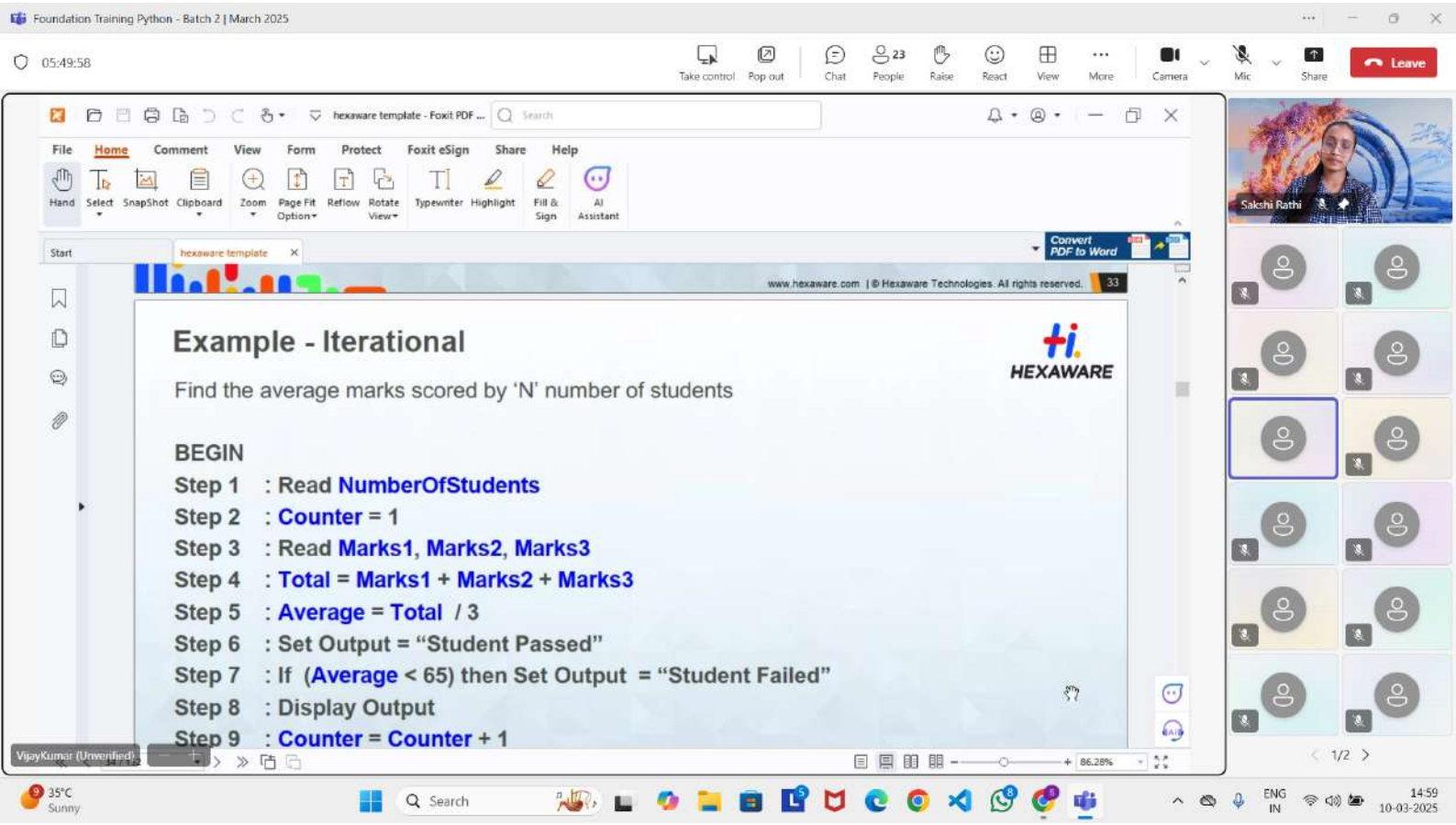

Foundation Training Python - Batch 2 | March 2025
05:38:16
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
www.hexaware.com | © Hexaware Technologies. All rights reserved.
29
Algorithm – Example (1 of 2)
HEXAWARE
Find the average marks scored by a student in 3 subjects:
BEGIN
Step 1 : Accept 3 marks say Marks1, Marks2, Marks3 scored by the student
Step 2 : Add Marks1, Marks2, Marks3 and store the result in Total
Step 3 : Divide Total by 3 and find the Average
Step 4 : Display Average
END
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
14:48
10-03-2025

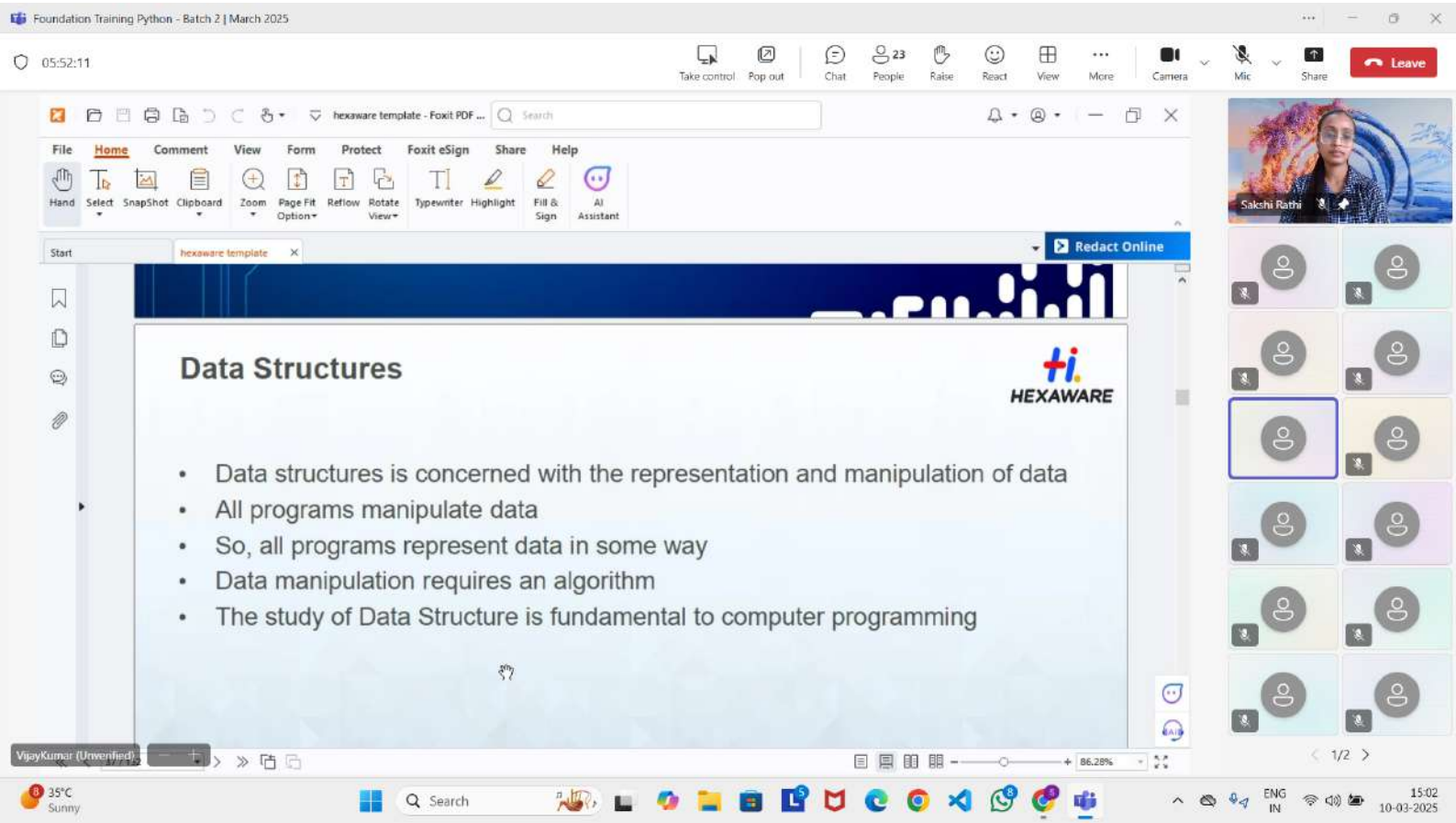

Foundation Training Python - Batch 2 | March 2025
05:40:08
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
Open video options
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Algorithm-Example (2 of 2)
HEXAWARE
Find the average marks scored by a student in 3 subjects:
BEGIN
Step 1 : Read Marks1, Marks2, Marks3
Step 2 : Sum = Marks1 + Marks2 + Marks3
Step 3 : Average = Sum / 3
Step 4 : Display Average
END
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
14:50
10-03-2025


Foundation Training Python - Batch 2 | March 2025
05:41:15
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Different Patterns in Algorithms
HEXAWARE
Sequential
Sequential constructs execute the program in the order in which they appear in the program
Selectional (Conditional)
Selectional constructs control the flow of statement execution in order to achieve the required result
Iterational (Loops)
Iterational constructs are used when a part of the program is to be executed several times
Sakshi Rathi
THARU...
Sangitaz Network
Internet access
VijayKumar (Unverified)
86.28%
35°C
Sunny
Search
ENG
IN
14:51
10-03-2025


Foundation Training Python - Batch 2 | March 2025
05:44:46
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Example - Selectional
HEXAWARE
Write an algorithm to find the average marks of a student. Also check whether the student has passed or failed.
For a student to pass, average marks should not be less than 65.
BEGIN
Step 1 : Read Marks1, Marks2, Marks3
Step 2 : Total = Marks1 + Marks2 + Marks3
Step 3 : Average = Total / 3
Step 4 : Set Output = "Student Passed"
Step 5 : if Average < 65 then Set Output = "Student Failed"
Step 6 : Display Output
END
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
14:54
10-03-2025


Foundation Training Python - Batch 2 | March 2025
05:45:28
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
Example - Iterational
HEXAWARE
Find the average marks scored by 'N' number of students
BEGIN
Step 1 : Read NumberOfStudents
Step 2 : Counter = 1
Step 3 : Read Marks1, Marks2, Marks3
Step 4 : Total = Marks1 + Marks2 + Marks3
Step 5 : Average = Total / 3
Step 6 : Set Output = "Student Passed"
Step 7 : If (Average < 65) then Set Output = "Student Failed"
Step 8 : Display Output
Step 9 : Counter = Counter + 1
Step 10 : If (Counter <= NumberOfStudents) then goto step 3
END
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
14:55
10-03-2025


Foundation Training Python - Batch 2 | March 2025
05:49:58
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF to Word
www.hexaware.com | © Hexaware Technologies. All rights reserved.
33
Example - Iterational
HEXAWARE
Find the average marks scored by 'N' number of students
BEGIN
Step 1 : Read NumberOfStudents
Step 2 : Counter = 1
Step 3 : Read Marks1, Marks2, Marks3
Step 4 : Total = Marks1 + Marks2 + Marks3
Step 5 : Average = Total / 3
Step 6 : Set Output = "Student Passed"
Step 7 : If (Average < 65) then Set Output = "Student Failed"
Step 8 : Display Output
Step 9 : Counter = Counter + 1
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
14:59
10-03-2025


Foundation Training Python - Batch 2 | March 2025
05:52:11
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
Search
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Redact Online
Data Structures
HEXAWARE
Data structures is concerned with the representation and manipulation of data
All programs manipulate data
So, all programs represent data in some way
Data manipulation requires an algorithm
The study of Data Structure is fundamental to computer programming
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:02
10-03-2025

Foundation Training Python - Batch 2 | March 2025

05:52:54

Take control | Pop out | Chat | People 23 | Raise | React | View | More | Camera | Mic | Share | Leave

hexaware template - Foxit PDF ...

File | Home | Comment | View | Form | Protect | Foxit eSign | Share | Help

Hand | Select | SnapShot | Clipboard | Zoom | Page Fit Option | Reflow | Rotate View | Typewriter | Highlight | Fill & Sign | AI Assistant

Start | hexaware template

Redact Online

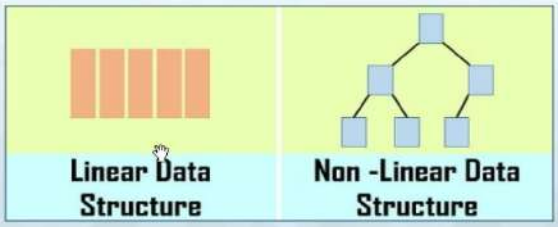
Types of Data Structure

HEXAWARE

There are basically two types of data structure

1.Linear Data Structure

2.Non-Linear Data Structure.



Sakshi Rathi

VijayKumar (Unverified)

86.28%

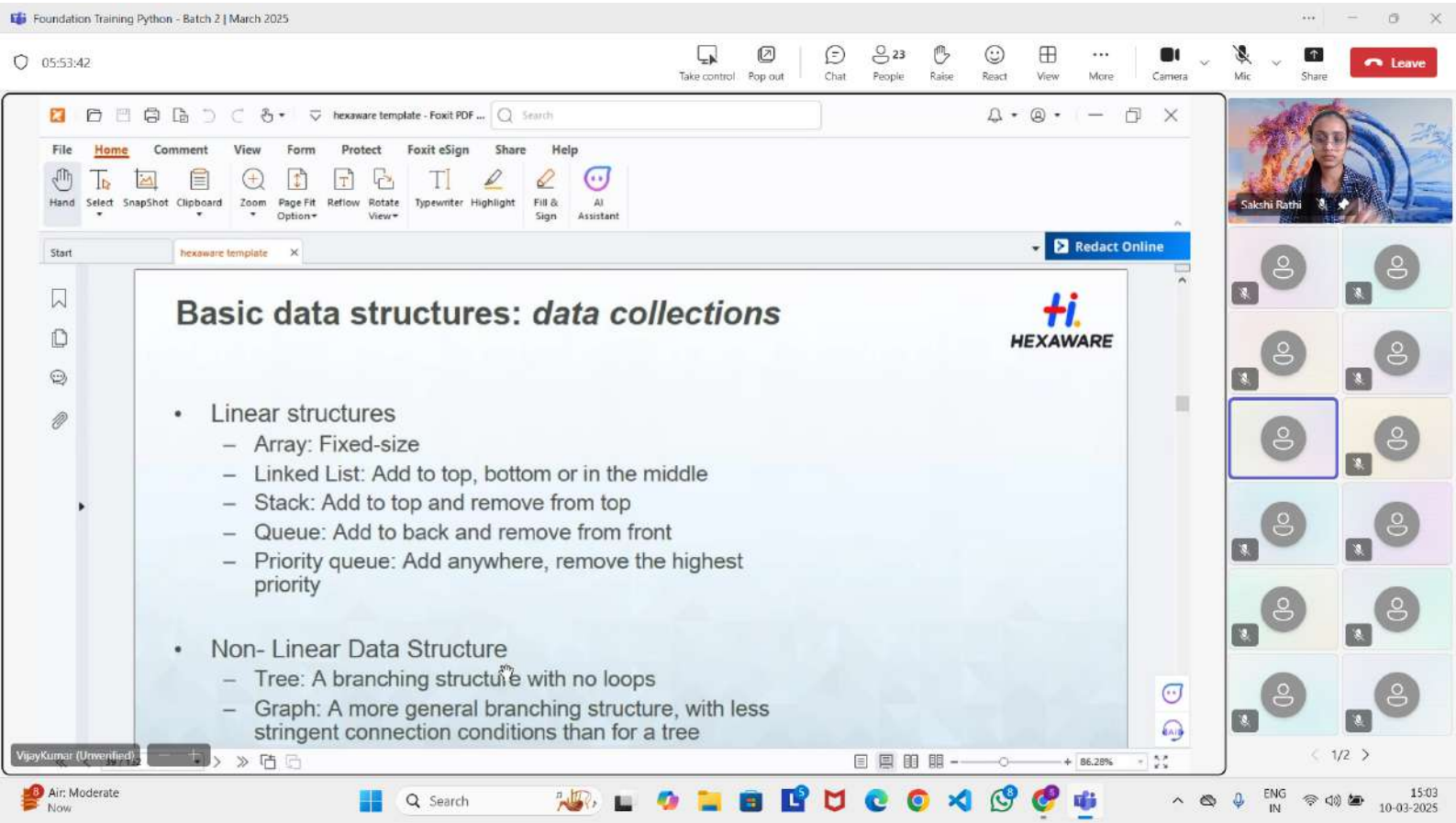
1/2

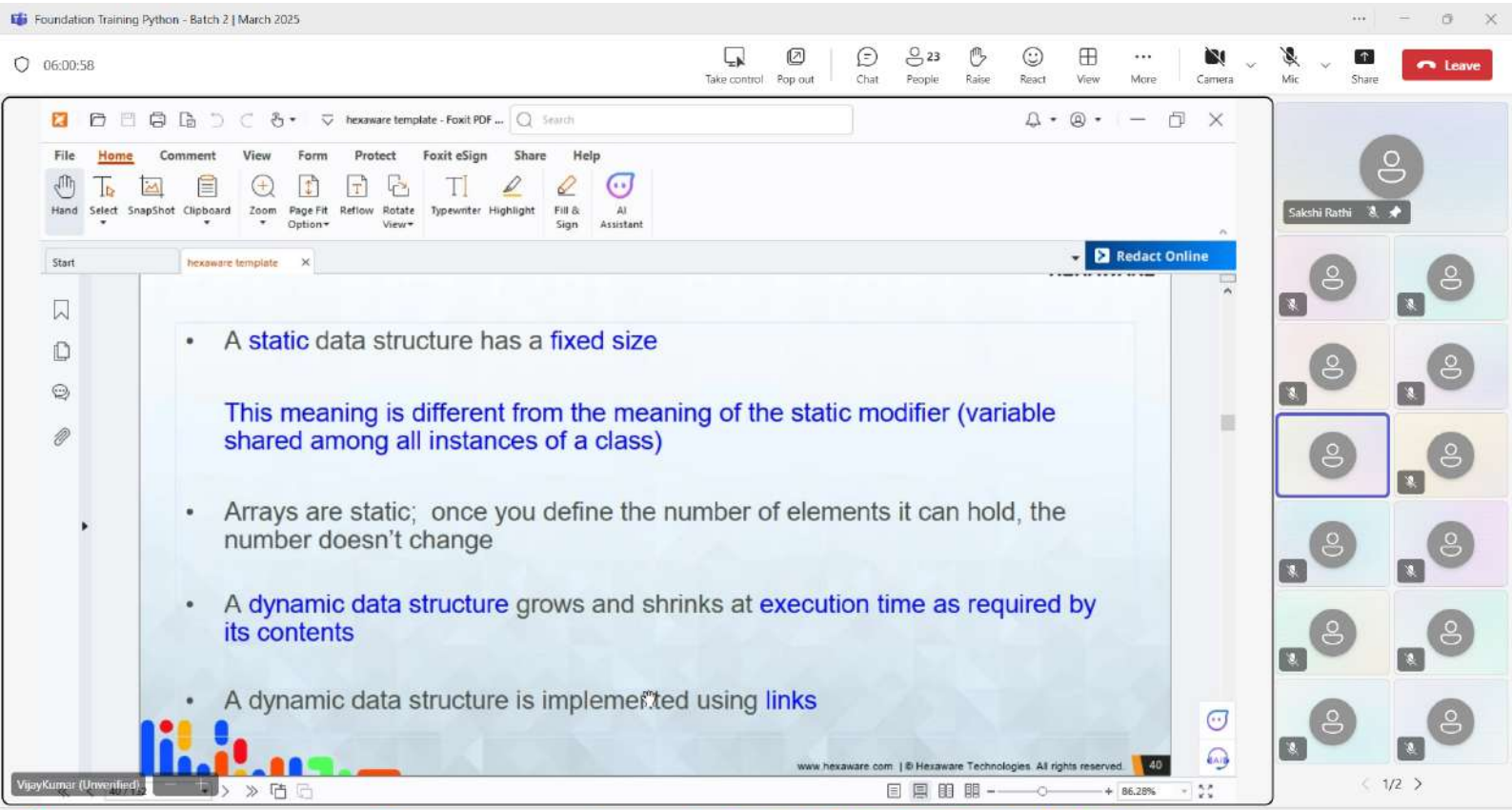
35°C Sunny

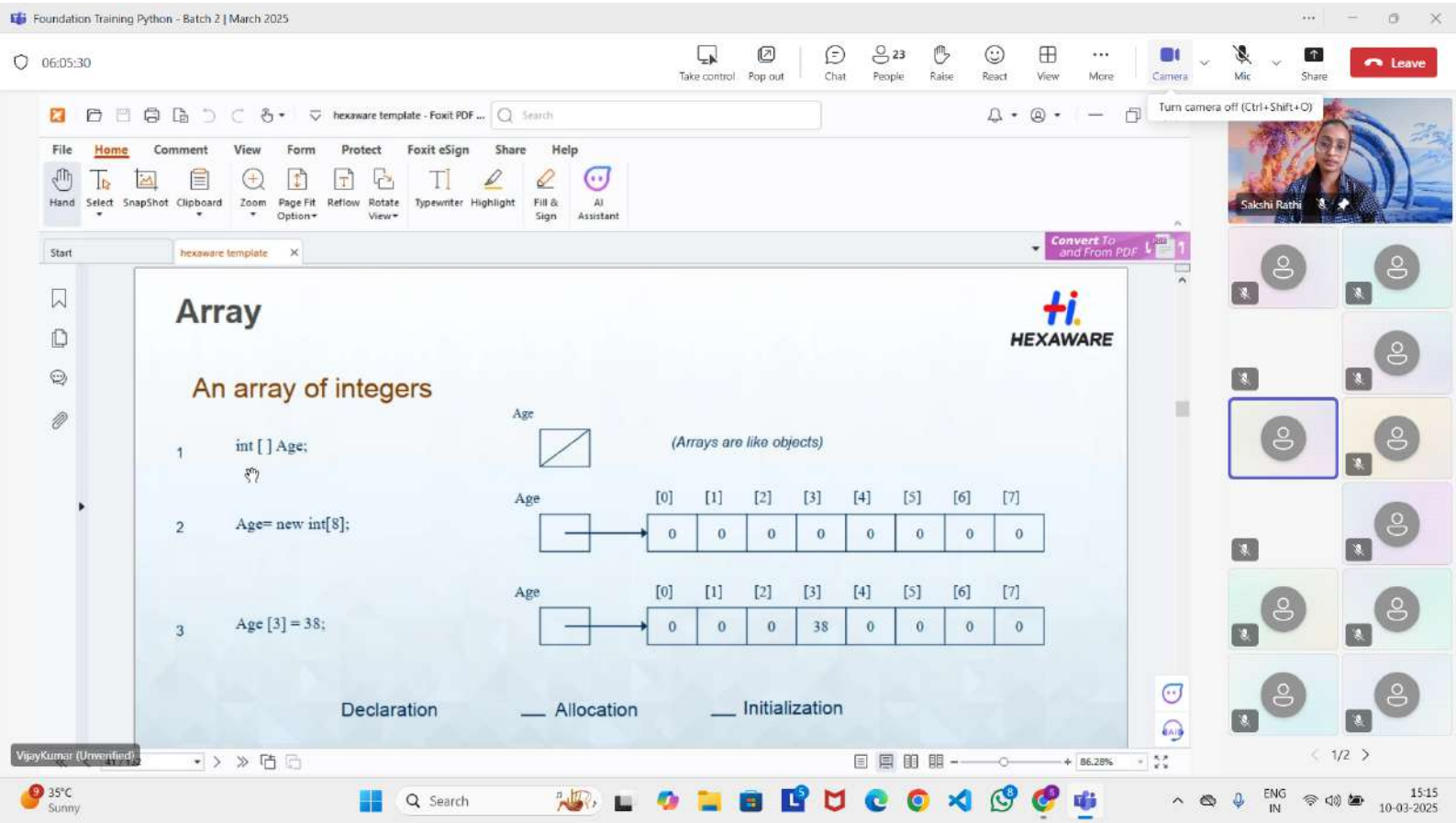
Search

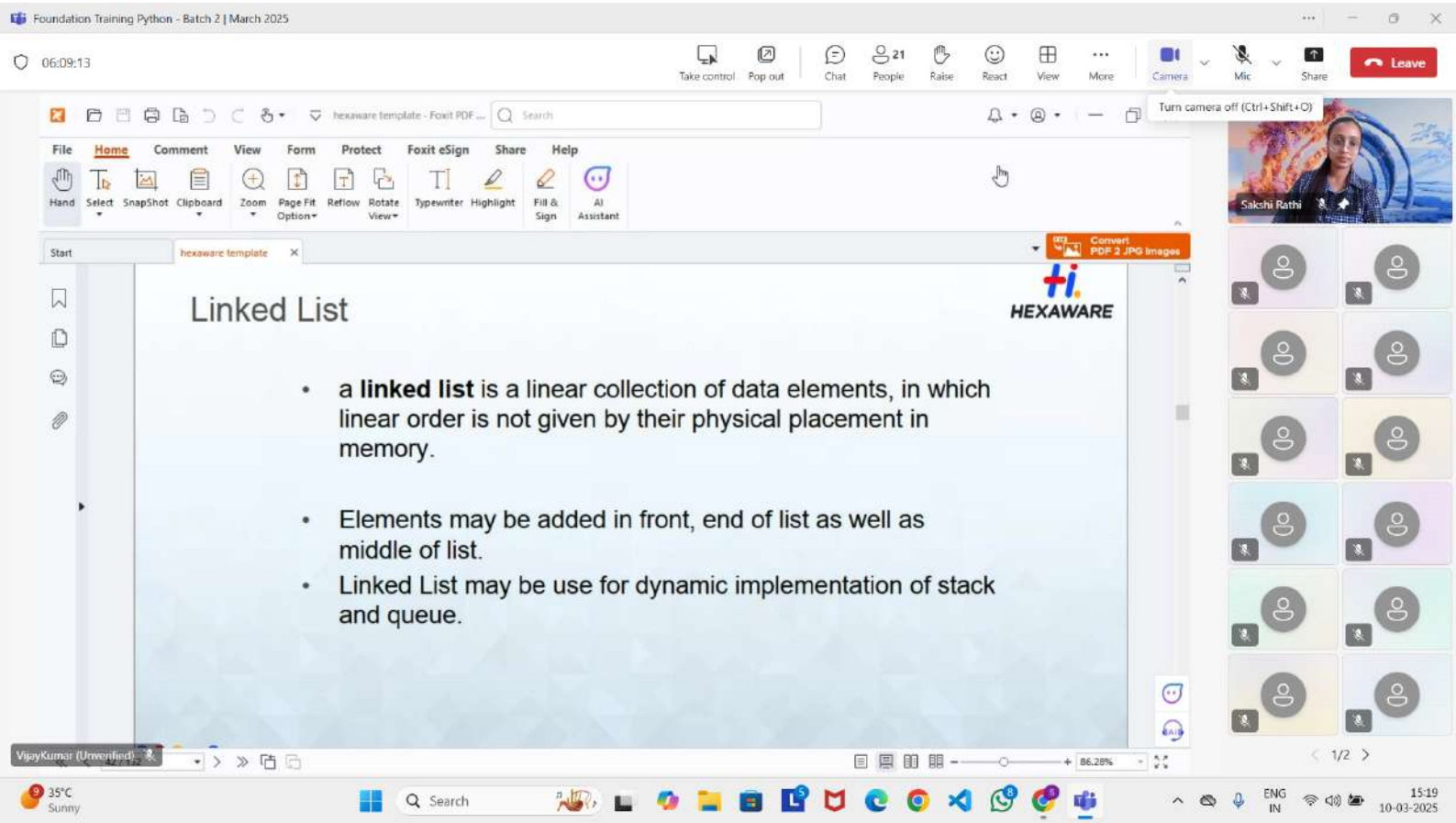
ENG IN

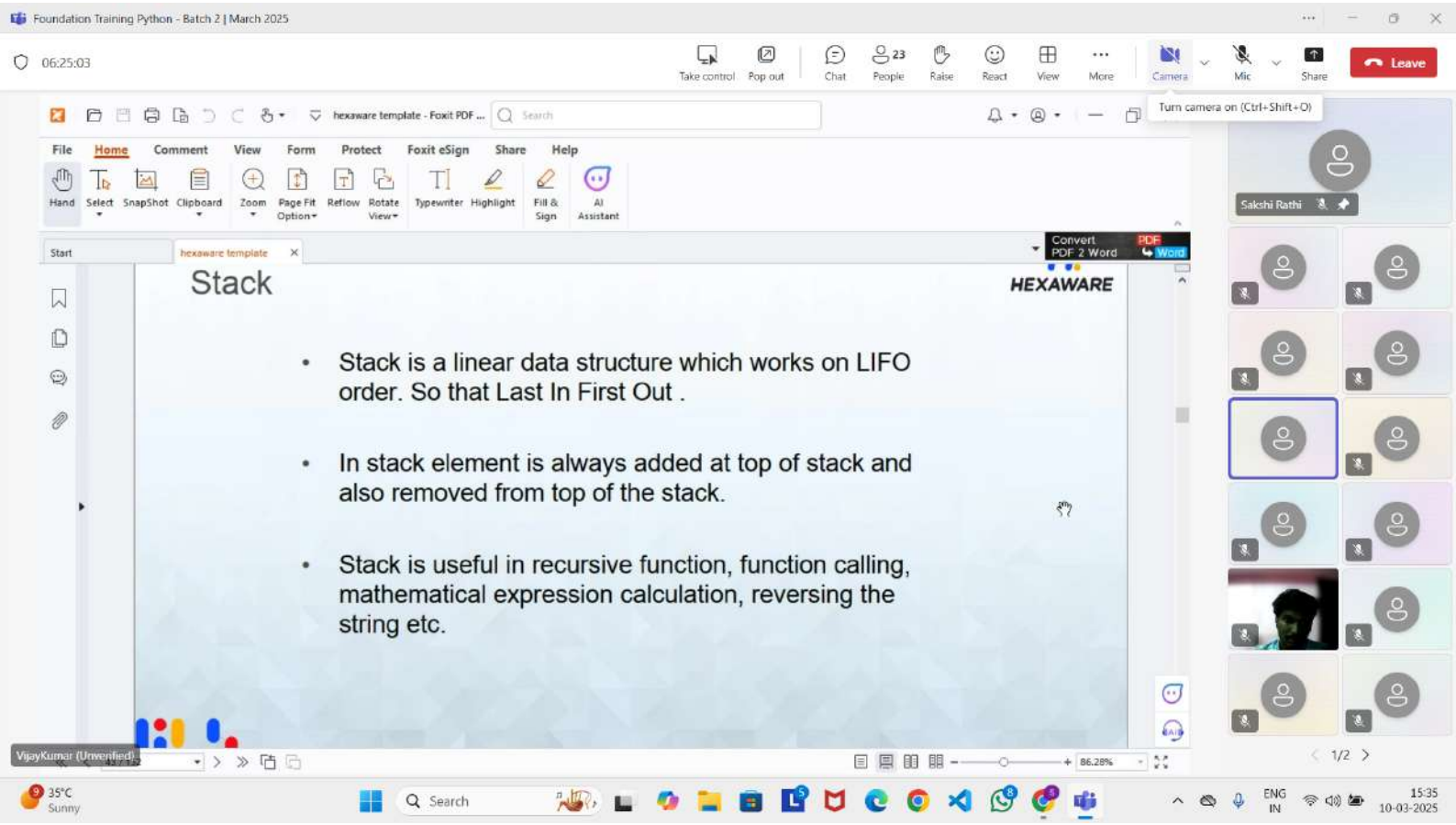
15:02 10-03-2025

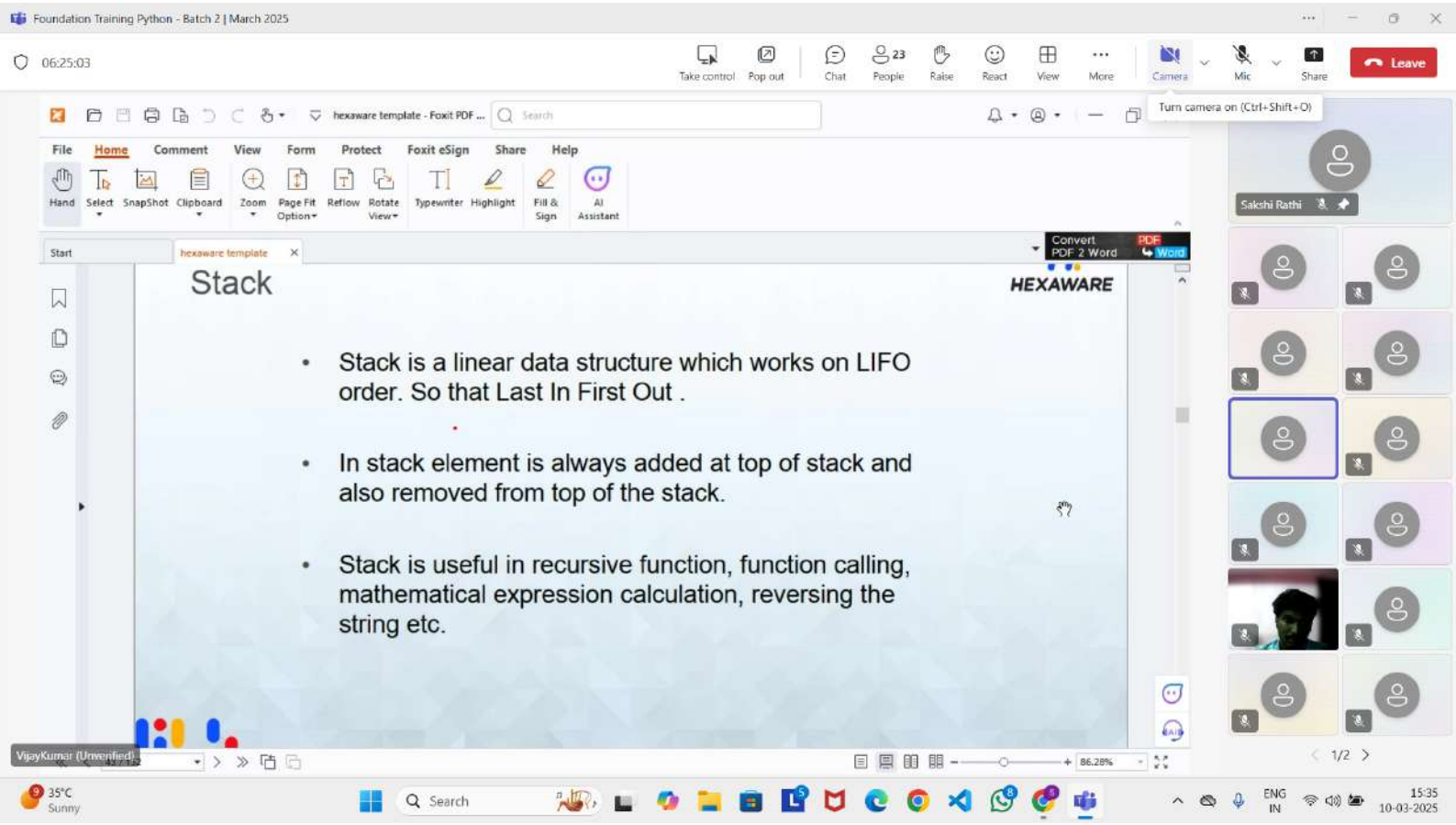

Foundation Training Python - Batch 2 | March 2025
05:53:42
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
Search
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Redact Online
Basic data structures: data collections
HEXAWARE
Linear structures
Array: Fixed-size
Linked List: Add to top, bottom or in the middle
Stack: Add to top and remove from top
Queue: Add to back and remove from front
Priority queue: Add anywhere, remove the highest priority
Non- Linear Data Structure
Tree: A branching structure with no loops
Graph: A more general branching structure, with less stringent connection conditions than for a tree
VijayKumar (Unverified)
86.28%
Sakshi Rathi
1/2
Air: Moderate
Now
Search
ENG
IN
15:03
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:00:58
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Redact Online
A static data structure has a fixed size
This meaning is different from the meaning of the static modifier (variable shared among all instances of a class)
Arrays are static; once you define the number of elements it can hold, the number doesn't change
A dynamic data structure grows and shrinks at execution time as required by its contents
A dynamic data structure is implemented using links
www.hexaware.com | © Hexaware Technologies. All rights reserved.
40
Sakshi Rathi
VijayKumar (Unverified)
1/2
35°C
Sunny
Search
ENG
IN
15:10
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:05:30
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
Turn camera off (Ctrl+Shift+O)
Sakshi Rathi
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert To and From PDF
Array
HEXAWARE
An array of integers
1
int [ ] Age;
2
Age= new int[8];
3
Age [3] = 38;
Age
(Arrays are like objects)
[0] [1] [2] [3] [4] [5] [6] [7]
0 0 0 0 0 0 0 0
0 0 0 38 0 0 0 0
Declaration
Allocation
Initialization
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:15
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:09:13
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
Turn camera off (Ctrl+Shift+O)
Sakshi Rathi
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF 2 JPG Images
Linked List
HEXAWARE
a linked list is a linear collection of data elements, in which linear order is not given by their physical placement in memory.
Elements may be added in front, end of list as well as middle of list.
Linked List may be use for dynamic implementation of stack and queue.
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:19
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:25:03
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
Turn camera on (Ctrl+Shift+O)
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF 2 Word
Stack
HEXAWARE
Stack is a linear data structure which works on LIFO order. So that Last In First Out .
In stack element is always added at top of stack and also removed from top of the stack.
Stack is useful in recursive function, function calling, mathematical expression calculation, reversing the string etc.
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:35
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:25:03
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
Turn camera on (Ctrl+Shift+O)
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Convert PDF 2 Word
Stack
HEXAWARE
Stack is a linear data structure which works on LIFO order. So that Last In First Out .
In stack element is always added at top of stack and also removed from top of the stack.
Stack is useful in recursive function, function calling, mathematical expression calculation, reversing the string etc.
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:35
10-03-2025

Foundation Training Python - Batch 2 | March 2025

06:27:41

Take control | Pop out | Chat | People 23 | Raise | React | View | More | Camera | Mic | Share | Leave

hexaware template - Foxit PDF ...

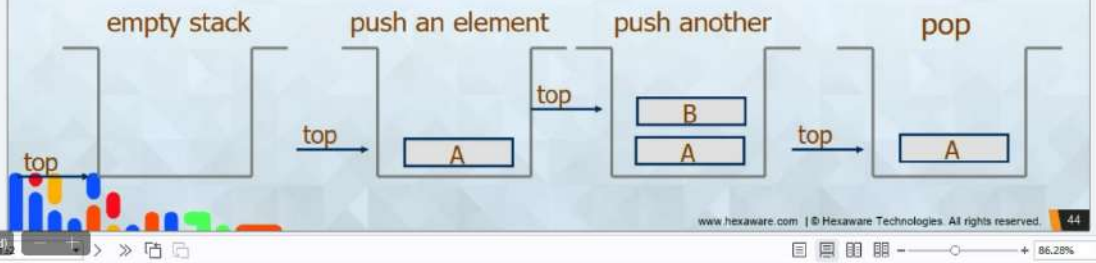
File Home Comment View Form Protect Foxit eSign Share Help

Hand | Select | SnapShot | Clipboard | Zoom | Page Fit Option | Reflow | Rotate View | Typewriter | Highlight | Fill & Sign | AI Assistant

Start | hexaware template

Merge and split PDFs

- LIFO (Last In, First Out) in Stack:
  The last element inserted will be the first to be retrieved, using Push and Pop
- Push
  - Add an element to the *top* of the stack
- Pop
  - Remove the element at the *top* of the stack



 44

Sakshi Rathi

1/2

VijayKumar (Unverified)

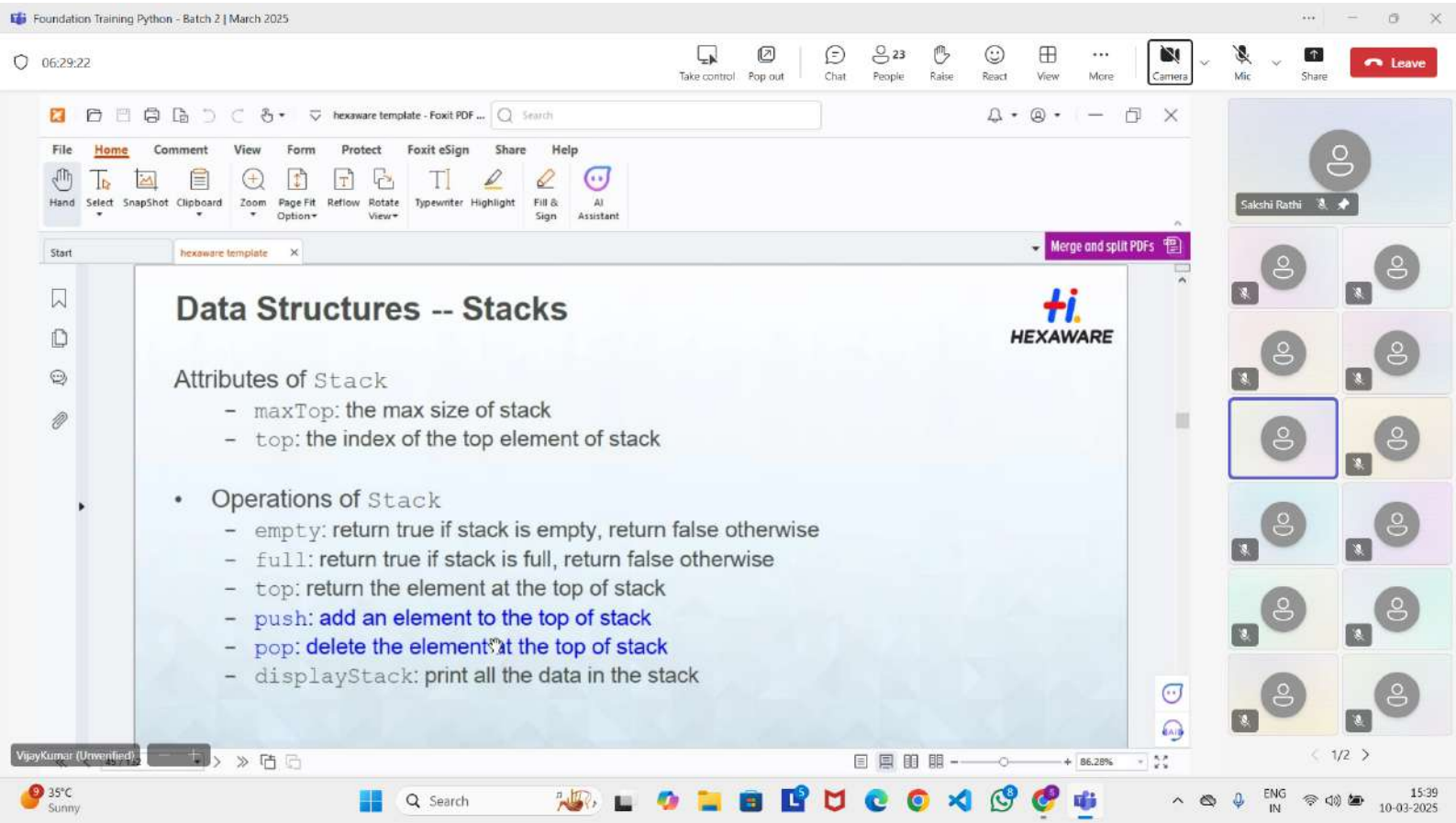
86.28%

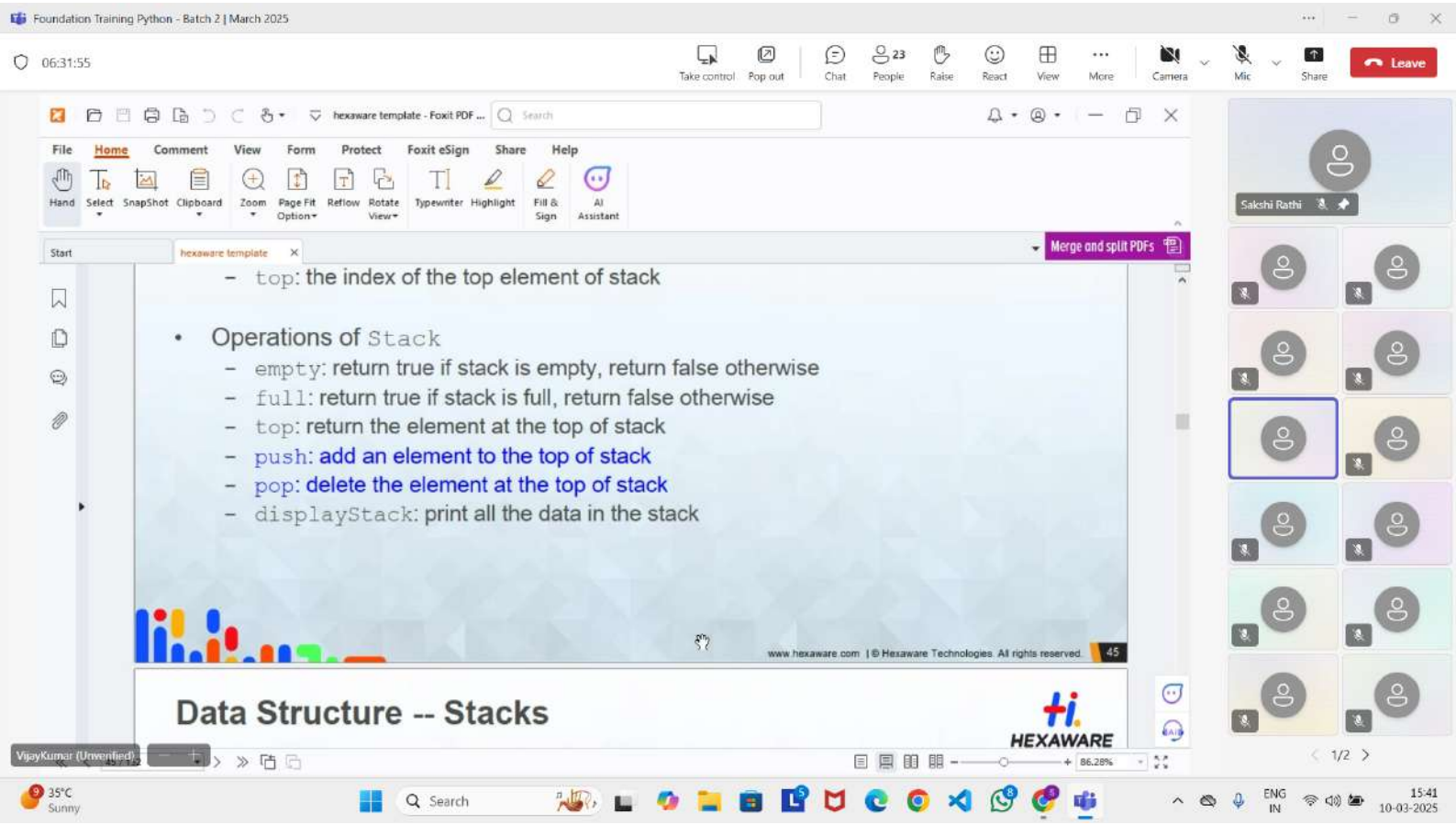
35°C Sunny

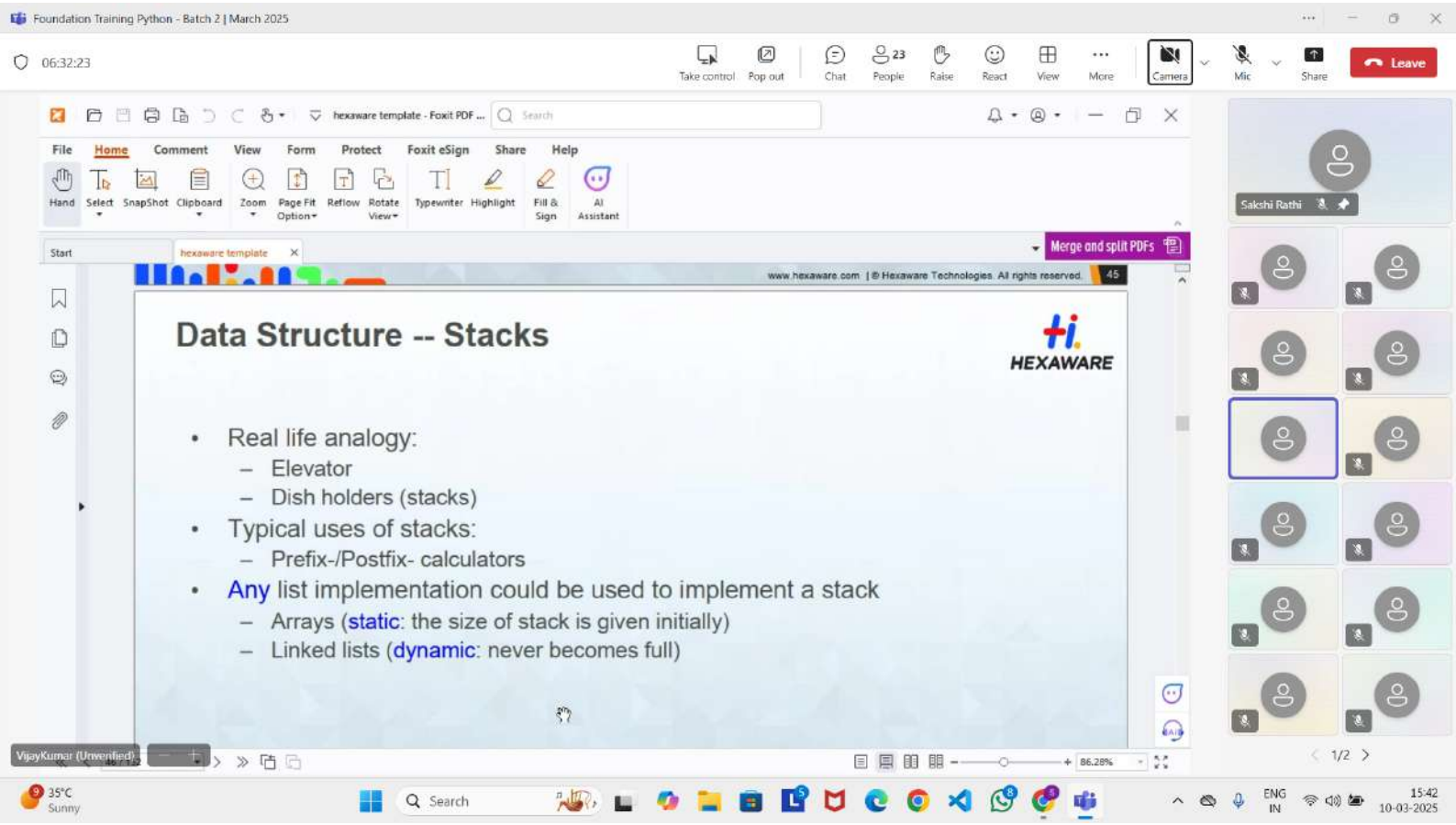
Search

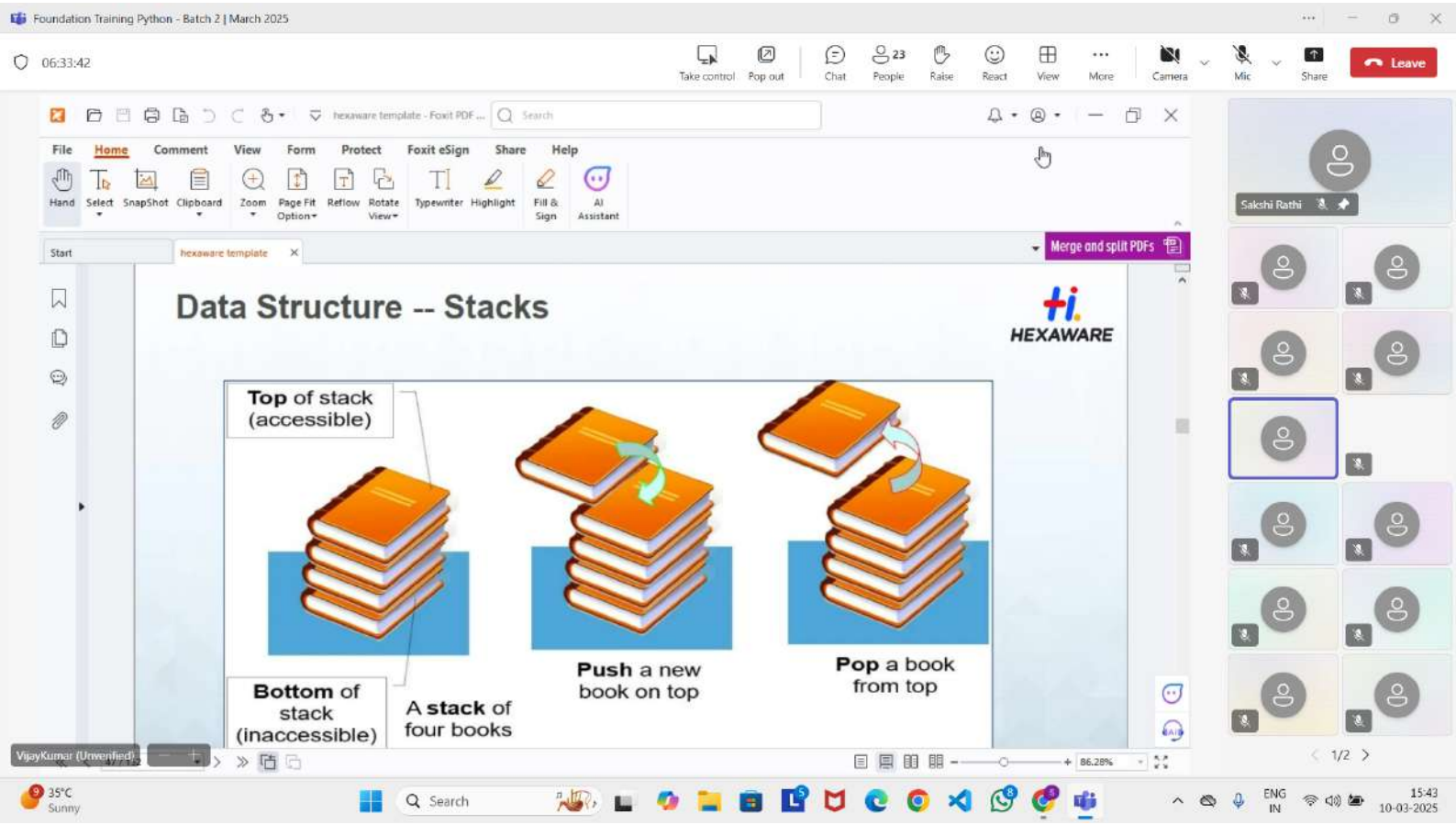
ENG IN

15:37 10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:29:22
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
Search
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Merge and split PDFs
Data Structures -- Stacks
HEXAWARE
Attributes of Stack
maxTop: the max size of stack
top: the index of the top element of stack
Operations of Stack
empty: return true if stack is empty, return false otherwise
full: return true if stack is full, return false otherwise
top: return the element at the top of stack
push: add an element to the top of stack
pop: delete the element at the top of stack
displayStack: print all the data in the stack
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:39
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:31:55
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Start
hexaware template
Merge and split PDFs
top: the index of the top element of stack
Operations of Stack
empty: return true if stack is empty, return false otherwise
full: return true if stack is full, return false otherwise
top: return the element at the top of stack
push: add an element to the top of stack
pop: delete the element at the top of stack
displayStack: print all the data in the stack
www.hexaware.com | © Hexaware Technologies. All rights reserved.
45
Data Structure -- Stacks
HEXAWARE
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:41
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:32:23
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
hexaware template - Foxit PDF ...
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Merge and split PDFs
Start
hexaware template
www.hexaware.com | © Hexaware Technologies. All rights reserved.
45
Data Structure -- Stacks
HEXAWARE
Real life analogy:
Elevator
Dish holders (stacks)
Typical uses of stacks:
Prefix-/Postfix- calculators
Any list implementation could be used to implement a stack
Arrays (static: the size of stack is given initially)
Linked lists (dynamic: never becomes full)
Sakshi Rathi
VijayKumar (Unverified)
86.28%
1/2
35°C
Sunny
Search
ENG
IN
15:42
10-03-2025


Foundation Training Python - Batch 2 | March 2025
06:33:42
Take control
Pop out
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
File
Home
Comment
View
Form
Protect
Foxit eSign
Share
Help
Hand
Select
SnapShot
Clipboard
Zoom
Page Fit Option
Reflow
Rotate View
Typewriter
Highlight
Fill & Sign
AI Assistant
Merge and split PDFs
Start
hexaware template
Data Structure -- Stacks
HEXAWARE
Top of stack (accessible)
Bottom of stack (inaccessible)
A stack of four books
Push a new book on top
Pop a book from top
Sakshi Rathi
1/2
35°C
Sunny
Search
ENG
IN
15:43
10-03-2025