

# SER 321 C Session

**SI Session**

**Monday, June 10th 2024**

*6:00 pm - 7:00 pm MST*

# Agenda



JSON Review

Serialization

Types of Streams

Using Threads

# SI Session Expectations

Thanks for coming to the **SER 321** SI session. We have a packed agenda and we are going to try to get through as many of our planned example problems as possible. This session will be recorded and shared with others.

- If after this you want to see additional examples, please visit the drop-in tutoring center.
- We will post the link in the chat now and at the end of the session.
  - [tutoring.asu.edu](https://tutoring.asu.edu)
- Please keep in mind we are recording this session and it will be made available for you to review 24-48 hours after this session concludes.
- Finally, please be respectful to each other during the session.

# Interact with us:

## Zoom Features



### Zoom Chat

- Use the chat feature to interact with the presenter and respond to presenter's questions.
- Annotations are encouraged

# SER 321

## JSON Review

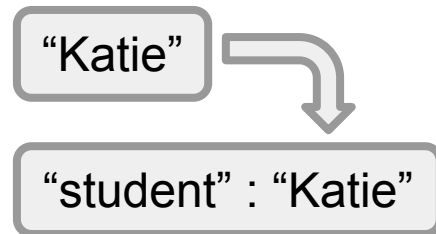
*Check out the recording for the full discussion!*

Data is stored in...

Name:Value pairs

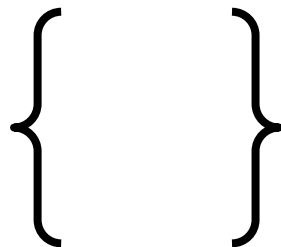


Members



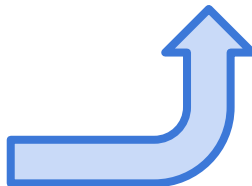
What uses curly braces?

Objects



What do Objects contain?

Members



# SER 321

## JSON Review

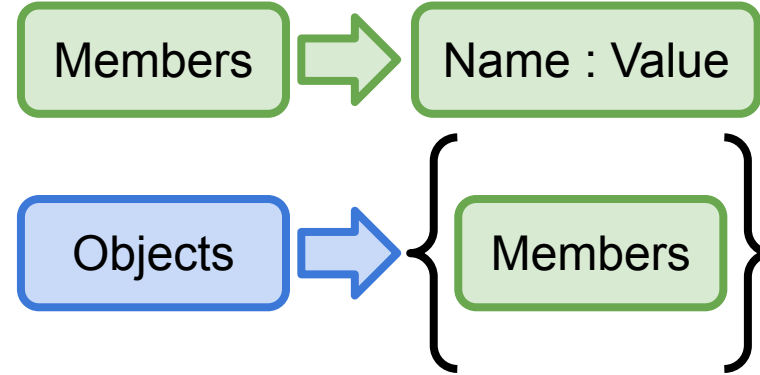
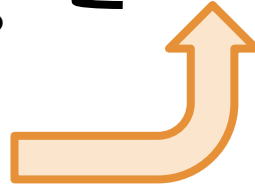
What uses brackets?

Arrays

[ ]

What do Arrays contain?

Any **Valid** Value



*Check out the recording for the full discussion!*

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## JSON Review

What is a valid value?

Strings

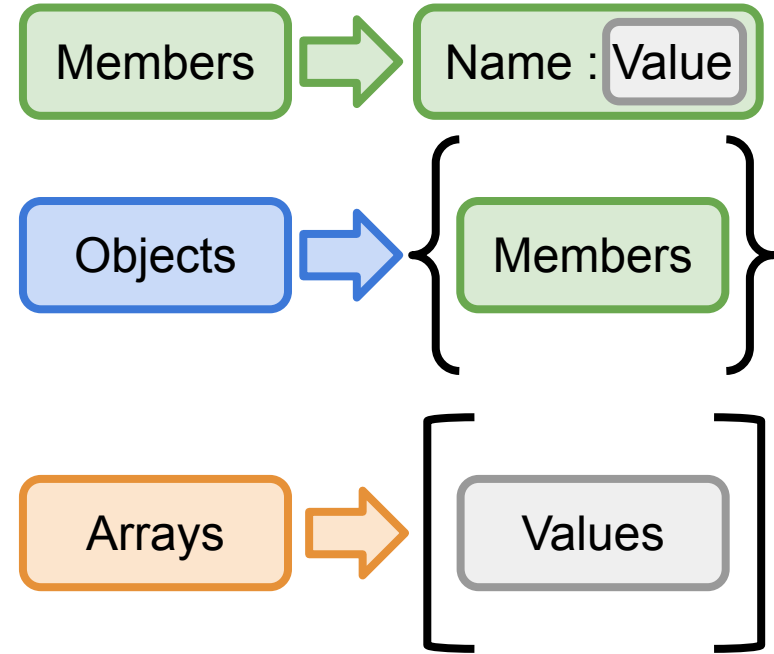
Booleans

Numbers

NULL

Objects

Arrays



*Check out the recording for the full discussion!*

*Check out the recording for the discussion!*



What is *serialization*?

“Translating data structures or object states for storage or transmission”



*Check out the recording for the discussion!*

What is *serialization*?



Data

“Translating data structures or object states for storage or transmission”

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## Serialization

*Check out the recording for the discussion!*



??

What is *serialization*?

Serialized Data

“Translating data structures or object states for storage or transmission”

*Check out the recording for the discussion!*

Can we recall some of the formats?

JSON

Java Object  
Serialization

Protocol Buffers

XML

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## Serialization

Binary

Text

Two main  
approaches for  
storing the  
content...

What about the data format?

JSON

Java Object  
Serialization

Protocol Buffers

XML

Binary

Text

Who uses ***TEXT***?

JSON

Java Object  
Serialization

Protocol Buffers

XML

*Check out the recording for the solution!*

Binary

Text

What does  
this imply?

Who uses ***BINARY***?

JSON

Java Object  
Serialization

Protocol Buffers

XML

*Check out the recording for the solution!*

**SER 321**

**Serialization**

Generic  
Superclass

# Streams and their types

```
OutputStream out = sock.getOutputStream();
```

Buffered Stream

Data Stream

Object Stream

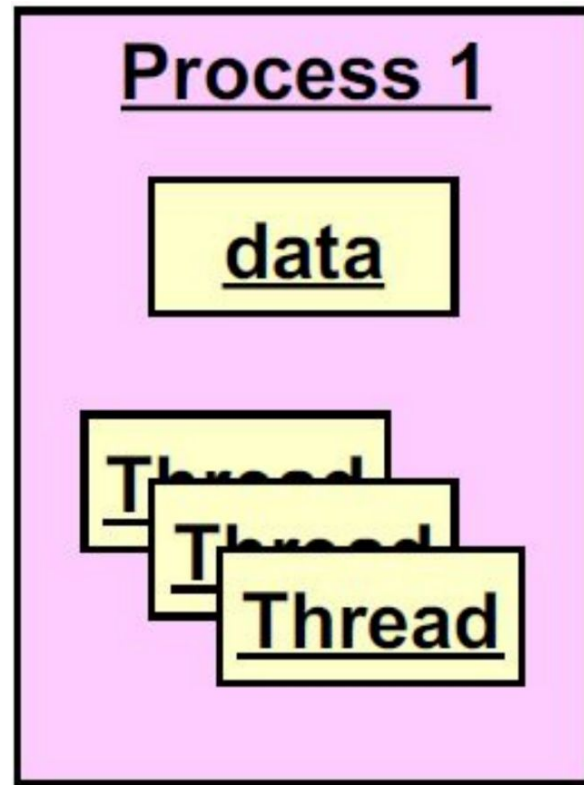
*Check out the recording for the solution!*

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## Threads

Remember that they exist  
*within* the parent process

What does that imply?



*Check out the recording for the solution!*



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## Threading Pitfalls

*Check out the recording for the solution!*

Race Condition

A thread never gains access to the resource it needs

Starvation

A thread is only able to acquire some of the resources it needs

Deadlock

More than one thread accesses a single resource at the same time

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Scratch Space

# Questions?



## Survey:

<http://bit.ly/ASN2324>



## Upcoming Events

### SI Sessions:

- Thursday, June 13th at 6:00 pm MST
- Sunday, June 16th at 6:00 pm MST
- Monday, June 17th at 6:00 pm MST

### Review Sessions:

- Review Session - **Wednesday**, July 3rd at 6:00 pm MST (2 hr Session)
- Q&A Session - Sunday, July 7th at 6:00 pm MST (Final Session)

# More Questions?

Check out our other resources!

tutoring.asu.edu



## Academic Support

Academic Support Network (ASN) provides a variety of free services in-person and online to help currently enrolled ASU students succeed academically.

### Services



#### Subject Area Tutoring

Need in-person or online help with math, science, business, or engineering courses? Just hop into our Zoom room or drop into a center for small group tutoring. We'll take it from there.

[Need help using Zoom?](#)

[View the tutoring schedule](#)

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Go to Zoom



#### Writing Tutoring

Need help with undergraduate or graduate writing assignments? Schedule an in-person or online appointment, access your appointment link, or wait in our drop-in queue.

[Access your appointment link](#)

[Access the drop-in queue](#)

Schedule Appointment



#### Online Study Hub

Join our online peer communities to connect with your fellow Sun Devils. Engage with our tools to search our bank of resources, videos, and previously asked questions. Or, ask our Tutorbot questions.

Now supporting courses in Math, Science, Business, Engineering, and Writing.

Online Study Hub

1-

Go to Zoom

2-

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[View digital resources](#)



1. Click on 'Go to Zoom' to log onto our Online Tutoring Center.
2. Click on 'View the tutoring schedule' to see when tutors are available for specific courses.

# More Questions?

## Check out our other resources!

[tutoring.asu.edu/online-study-hub](https://tutoring.asu.edu/online-study-hub)

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## Online Study Hub

Online peer communities for students and tutors, YouTube channels, and Tutorbots.



### What are online peer communities?

Individual courses have an online peer community that allows you to connect with your peers to post and answer questions and to develop study groups.



### How can tutoring center videos help?

Videos can help supplement the learning you're doing in and outside of class and include step-by-step methods for how to understand concepts.



### How does the Tutorbot work?

You can ask the Tutorbot questions about course concepts and the Tutorbot will recommend additional resources and examples to help address your questions.

Select a subject

- Any -

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Business

### ACC 231

Uses of Accounting Info I

 [Peer Community](#)

### ACC 241

Uses of Accounting Info II

 [Peer Community](#)

### CIS 105

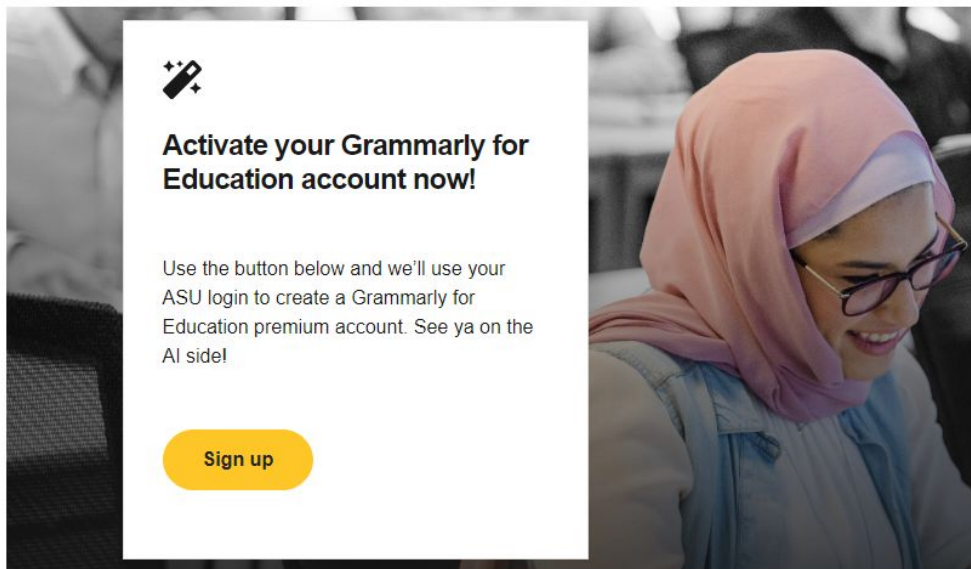
Computer Applications and Information Technology

 [Peer Community](#)

Don't forget to check out the Online Study Hub for additional resources!

# Expanded Writing Support Available

Including Grammarly for Education, at no cost!



[tutoring.asu.edu/expanded-writing-support](https://tutoring.asu.edu/expanded-writing-support)

\*Available slots for this pilot are limited

## Additional Resources

- [Course Repo](#)
- [Gradle Documentation](#)
- [GitHub SSH Help](#)
- [Linux Man Pages](#)
- [OSI Interactive](#)
- [MDN HTTP Docs](#)
  - [Requests](#)
  - [Responses](#)
- [JSON Guide](#)
- [org.json Docs](#)
- [javax.swing package API](#)
- [Swing Tutorials](#)
- [Dining Philosophers Interactive](#)
- [Austin G Walters Traffic Comparison](#)