SER 321 C Session

SI Session

Monday, May 20th 2024

6:00 pm - 7:00 pm MST

Agenda

What is SI?

About Me

Session Times & Expectations

Course Tips!

Gradle

OSI Lower Layers

What is SI? Informational Video

What is SI?



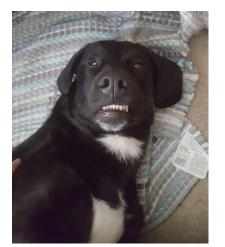
About Me Katie

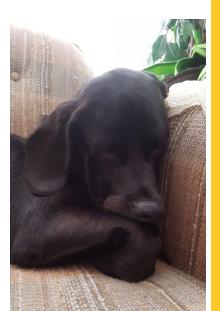
- Born and raised near Chicago, Illinois
 - Moved around within the Northern Suburbs
 - Currently in Grayslake
- Work at a local Italian restaurant
- Received AS from my local Community College
- Transferred to ASU at the start of 2020
- Majoring in Software Engineering
- Runs in the family
 - Father is a Software Architect
 - Mother is a Quality Assurance Analyst

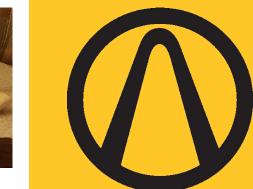


About Me Katie

- Hobbies
 - o Gaming
 - o Football (Go Bears!)
 - Reading
 - Learning
 - o Doggos! 😊



















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.
- 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:

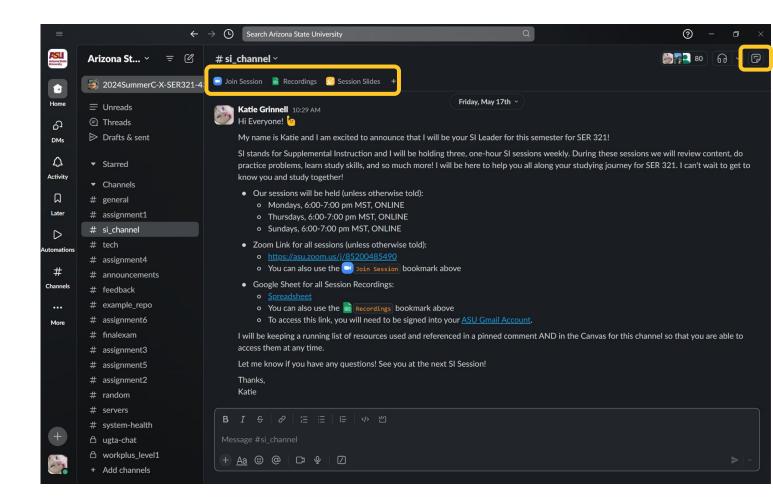
Zoom Features



Zoom Chat

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

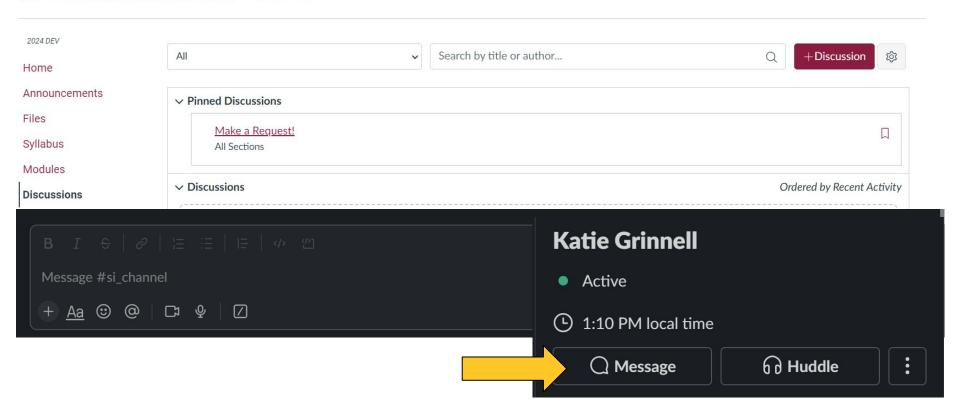
SER 321 Overview



SER 321 Making a Request

■ DEV-2024Summer-SER321-01-SI > Discussions

- Post in the Canvas Discussion Board
- 2. Post in the Slack workspace #si_channel
- 3. Send me a DM on Slack



SER 321 Tips for Success!

If a PDF is required, COMPLETE IT AS YOU MAKE PROGRESS!

- Start assignments ASAP
 - Read the entire document first!
 - Try to group the requirements into sections
- Commit a lot
- Use the <u>Course Repo</u> it's there for a reason!
- Monitor the slack channels!
- Ask questions right away Sparky!





SER 321 Tips for Success!

Be sure to watch the <u>Distributed Systems Intro Videos</u>

These videos layout the foundation of this course;

DO NOT SKIP THEM!

What is a distributed system?

How is it different?

Why do we care?

SER 321 Tips for Success!

Troubleshooting Skills are **HUGE**

Looking to find the balance







You will need two systems

Your MAIN device

Secondary Device

AWS EC2 Instance

Linux VM





SER 321
Setup

Both systems *need...*

Java 17 or 18

Gradle 7.4.2

User Guide

GIT

SSH Guide



Watch the **Gradle Canvas Videos!**

Videos cover:

- Build Structure
- Plugins
- Tasks
- Commands (build, clean, run, and test)
- Arguments



Which if statement will execute with gradle SocketClient -Phost=localhost -Pnumber=5 ?

```
if (project.hasProperty("host") && project.hasProperty("message") && project.hasProperty("number")) {
  args(project.getProperty('host'),
          project.getProperty('message'),
Α.
          project.getProperty('number'));
} else if (project.hasProperty("host") && project.hasProperty("message")) {
  args(project.getProperty('host'),
В.
          project.getProperty('message'));
} else if (project.hasProperty("host") && project.hasProperty("number")) {
  args(project.getProperty('host'),
C.
          project.getProperty('number'));
   else if (project.hasProperty("host")) {
D_args(project.getProperty('host'));
```



Which if statement will execute with gradle SocketClient -Phost=localhost -Pnumber=5 ?

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if (project.hasProperty("host") && project.hasProperty("message") && project.hasProperty("number")) {
  args(project.getProperty('host'),
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} else if (project.hasProperty("host") && project.hasProperty("message")) {
  args(project.getProperty('host'),
В.
          project.getProperty('message'));
} else if (project.hasProperty("host") && project.hasProperty("number")) {
  args(project.getProperty('host'),
          project.getProperty('number'));
   else if (project.hasProperty("host")) {
D_args(project.getProperty('host'));
```



Which if statement will execute with gradle SocketClient?

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          project.getProperty('message'),
          project.getProperty('number'));
  else if (project.hasProperty("host") && project.hasProperty("message")) {
  args(project.getProperty('host'),
В.
          project.getProperty('message'));
} else if (project.hasProperty("host") && project.hasProperty("number")) {
  args(project.getProperty('host'),
          "Set by Gradle, since nothing provided: https://gph.is/2y76sj4",
C.
          project.getProperty('number'));
   else if (project.hasProperty("host")) {
D args(project.getProperty('host'));
```



Which if statement will execute with gradle SocketClient?

```
if (project.hasProperty("host") && project.hasProperty("message") && project.hasProperty("number")) {
  args(project.getProperty('host'),
          project.getProperty('message'),
          project.getProperty('number'));
  else if (project.hasProperty("host") && project.hasProperty("message")) {
  args(project.getProperty('host'),
В.
                                                                                      NONE!
          project.getProperty('message'));
} else if (project.hasProperty("host") && project.hasProperty("number")) {
  args(project.getProperty('host'),
          "Set by Gradle, since nothing provided: https://gph.is/2y76sj4",
C.
          project.getProperty('number'));
   else if (project.hasProperty("host")) {
                                                                 How could we change that?
D_args(project.getProperty('host'));
```

SER 321
OSI Model

Unit

Layer

What we are *really* talking about

Data	Application	
Data	Presentation	
Data	Session	
Segment	Transport	
Packet	Network	
Frame	Data Link	
Bits	Physical	



Port

128.148.32.110 8080



Subnet

128.148 32.110:8080



Network

128.148 32.110:8080



Host

128.148.32.110.8080



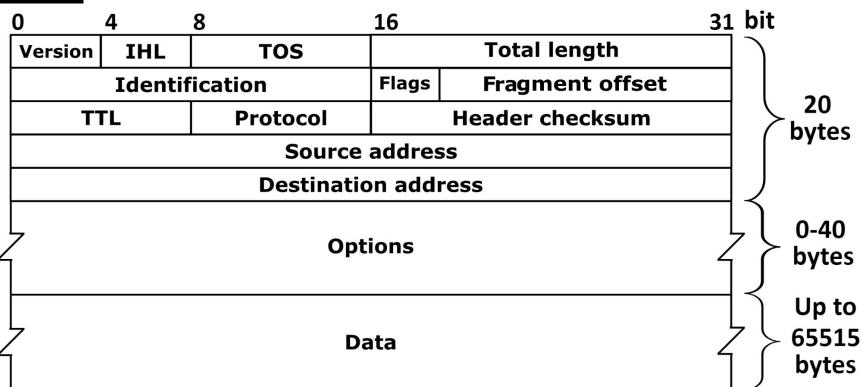
TCP	UDP

SER 321

What type of header is this?

IP Header

Headers



SER 321 Headers

TCP or UDP Header?

Offs	0							1	1							2 3							
Octet	Bit	0	1	2	3	4	5	6 7	0	1	2	3	4	5	6	7	7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7						
0	0	Source port														Destination port							
4	32	Sequence number																					
8	64	Acknowledgment number (if ACK set)																					
12	96	Da	ata c	offs	et			erved 0 0	C W R	ECE	U R G	A C K	P S H	R S T	SYN	FIZ	Window Size						
16	128	Checksum Urgent pointer (if URG set)																					
20	160		·																				
:	:		Options (if data offset > 5. Padded at the end with "0" bits if necessary.)																				
56	448																						

SER 321 Scratch Space

Upcoming Events

SI Sessions:

- Thursday, May 23rd at 6:00 pm MST
- Sunday, May 26th at 6:00 pm MST CANCELLED (Closed for Memorial Day)
- Monday, May 27th at 6:00 pm MST CANCELLED (Closed for Memorial Day)
- Thursday, May 30th at 6:00 pm MST

Review Sessions:

TBD

Questions?

Survey:

http://bit.ly/ASN2324



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More Questions? Check out our other resources!

tutoring.asu.edu



Academic Support Network

Services V Faculty and Staff Resources About Us V

University College

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

View digital resources

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

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

Go to Zoom

Need help using Zoom?

View the tutoring schedule

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

Select a subject
- Any -







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

^{*}Available slots for this pilot are limited

Additional Resources

- Course Repo
- **Gradle Documentation**
- GitHub SSH Help
- Linux Man Pages
- OSI Interactive