

SER 321 B Session

SI Session

Monday, October 16th 2023

4:00 - 5:00 pm MST

Agenda



Gradle

Tips

Handling Arguments

Lower Layer Review

TCP and Wireshark

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
- 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

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More Gradle Tips

These tips **and more** are covered by Dr Mehlhase in the canvas shell [here](#)!

`gradle tasks` will list runnable commands

`gradle clean` will clear the build directory 

Make sure to include argument handling and default arguments for assignments!

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Gradle Arguments

Check out the recording for the solution!

Which of the following if statements 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'),  
        project.getProperty('number'));  
} else if (project.hasProperty("host") && project.hasProperty("message")) {  
    args(project.getProperty('host'),  
        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",  
        project.getProperty('number'));  
} else if (project.hasProperty("host")) {  
    args(project.getProperty('host'));  
}
```

A.

B.

C.

D.

Check out the recording for the solution!

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Gradle Arguments

Which of the following if statements 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'),  
        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",  
        project.getProperty('number'));  
} else if (project.hasProperty("host")) {  
    args(project.getProperty('host'));  
}
```

A.

B.

C.

D.

How could we solve that?

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Gradle Arguments

Which of the following if statements will execute with
gradle SocketClient ?

1. Add another catch
 - a. What kind?
 - b. Empty Else
2. Supply default arguments
 - a. How?
 - b. args(<prop>)

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

A.

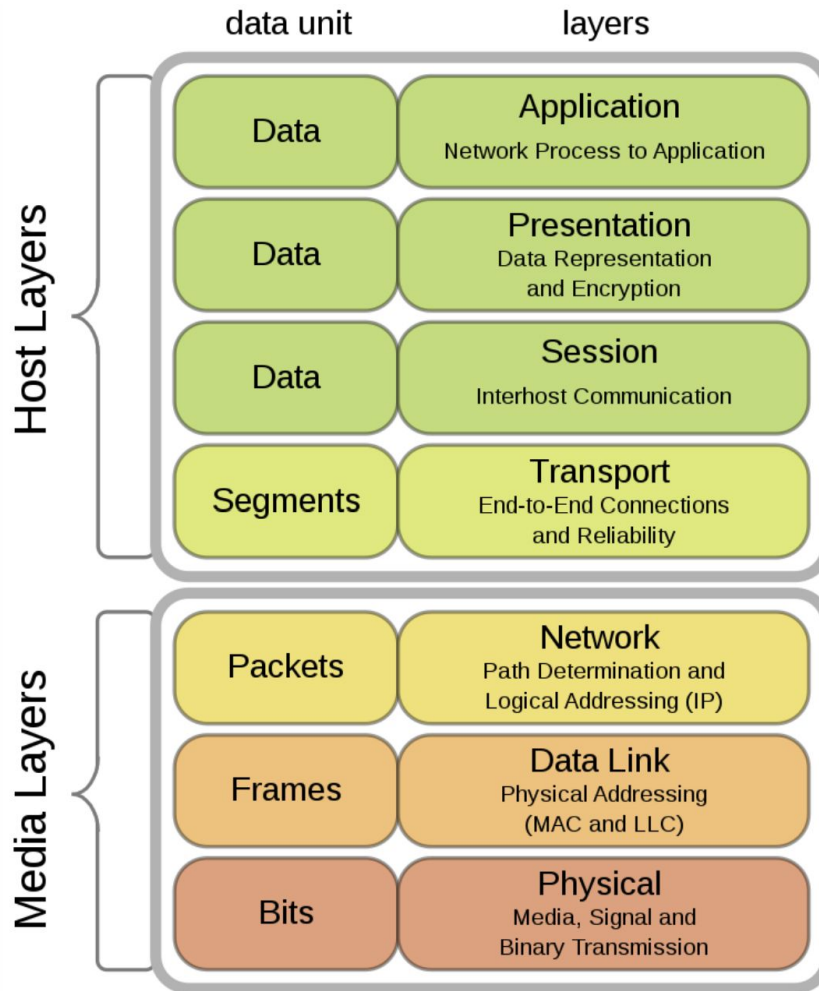
B.

C.

D.

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OSI Model



But what are we *really* talking about?

Check out the recording for the solution!

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TCP and UDP

Major points to remember:

TCP has Quality of Service, and UDP is for *speed*

TCP

-
-
-

UDP

-
-
-



Check out the recording for the solution!

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Closer Look at TCP

```
57508 → ddi-tcp-1(8888) [PSH, ACK] Seq=5 Ack=1 Win=131328 Len=16
ddi-tcp-1(8888) → 57508 [ACK] Seq=1 Ack=21 Win=62848 Len=0
57508 → ddi-tcp-1(8888) [PSH, ACK] Seq=21 Ack=1 Win=131328 Len=77
ddi-tcp-1(8888) → 57508 [ACK] Seq=1 Ack=98 Win=62848 Len=0
```

TCP segment header

Offsets		0								1								2								3							
Octet	Bit	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	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	Data offset				Reserved 0 0 0 0				C W R	E C E	U R G	A C K	P S H	R S T	S Y N	F I N	Window Size															
16	128	Checksum																Urgent pointer (if URG set)															
20	160	Options (if <i>data offset</i> > 5. Padded at the end with "0" bits if necessary.)																															
:	:																																
56	448																																

Questions?

Survey:

https://bit.ly/asn_survey



Upcoming Events

SI Sessions:

- Thursday, October 19th 2023 at 7:00 pm MST
- Sunday, October 22nd 2023 at 7:00 pm MST
- Monday, October 23rd 2023 at 4:00 pm MST

Review Sessions:

- TBD

More Questions?

Check out our other resources!

tutoring.asu.edu



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Services



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[Access the drop-in queue](#)

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1-

Go to Zoom

2-

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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

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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!

Additional Resources

[CourRepo](#)

[GitHub SSH Docs](#)

[Gradle Documentation](#)