

# SER 321 B Session

**SI Session**

**Sunday, October 29th 2023**

*7:00 - 8:00 pm MST*

# Agenda



Assignment 3

Part 2 GUI

Protocols

Socket Steps Review

# 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

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## Assignment 3 Part 2 GUI

We are diving right into the GUI!

The GUI window



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## Assignment 3

You are designing your own custom protocol here!

Get a good 'skeleton' laid out before you start coding!

If you are stuck on the protocol, use the protocol from Part 1 for inspiration!

Let's look at the Part 1 protocol a bit...

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## Assignment 3 Protocols

You are designing your own custom protocol here!

Get a good 'skeleton' laid out before you start coding!

If you are stuck on the protocol, use the protocol from Part 1 for inspiration!

Let's look at the Part 1 protocol a bit...

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## Assignment 3 Protocols

Part 1 Protocol

***No Modifications Allowed***

Starting with “Echo”, this is the Request Protocol:

Request:

```
{  
  "type" : "echo", -- type of request  
  "data" : <String> -- String to be echoed  
}
```



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## Assignment 3 Protocols

Part 1 Protocol

***No Modifications Allowed***

And the corresponding Response

General response:

```
{  
  "type" : "echo", -- echoes the initial response  
  "ok" : <bool>, -- true or false depending on request  
  "echo" : <String>, -- echoed String if ok true  
  "message" : <String>, -- error message if ok false  
}
```

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## Assignment 3 Protocols

```
{  
  "type" : "echo", -- echoes the initial response  
  "ok" : <bool>, -- true or false depending on request  
  "echo" : <String>, -- echoed String if ok true  
  "message" : <String>, -- error message if ok false  
}
```

Think fast! Which of the following responses **is invalid**?

A. {  
 "type" : "echo",  
 "ok" : false,  
 "message" : "Error!"  
}

C. {  
 "type" : "echo",  
 "ok" : true,  
 "message" : "Error!"  
}

B. {  
 "type" : "echo",  
 "ok" : true,  
 "echo" : "hello"  
}

D. {  
 "type" : "echo",  
 "ok" : false,  
 "echo" : "Error!"  
}

*Check out the recording for the solution!*

## Assignment 3 Protocols

## 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																																

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## Assignment 3 Protocols

Part 2 specifies that your Protocol **must have headers and optional payloads.**

So our JSON should look something like this:

```
{  
    "header" : header contents,  
    "payload" : payload contents  
}
```

Is that for a request, a response, or both?

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## Assignment 3 Protocols

```
{  
  "type" : "echo", -- echoes the initial response  
  "ok" : <bool>, -- true or false depending on request  
  "echo" : <String>, -- echoed String if ok true  
  "message" : <String>, -- error message if ok false  
}
```

What would the Echo protocol look like with a header and payload?

```
{  
  "header" :
```

*Check out the recording for the solution!*

```
  "payload" :
```

```
}
```

```
{  
  "header" : header contents,  
  "payload" : payload contents  
}
```

```
{"header": { "operation": "add", "base": "2", "response": "json" }, "payload": { "num1": "10", "num2": "11" } }
```

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### Assignment 3 Protocols

For example, let's look at [SimpleCustomProtocol](#)

```
{  
    "header" :
```

```
// get the 'header' and the 'payload'  
JSONObject headerJSON = (JSONObject)data.get("header");  
JSONObject payloadJSON = (JSONObject)data.get("payload");
```

```
    "payload" :
```

*Check out the recording for the solution!*

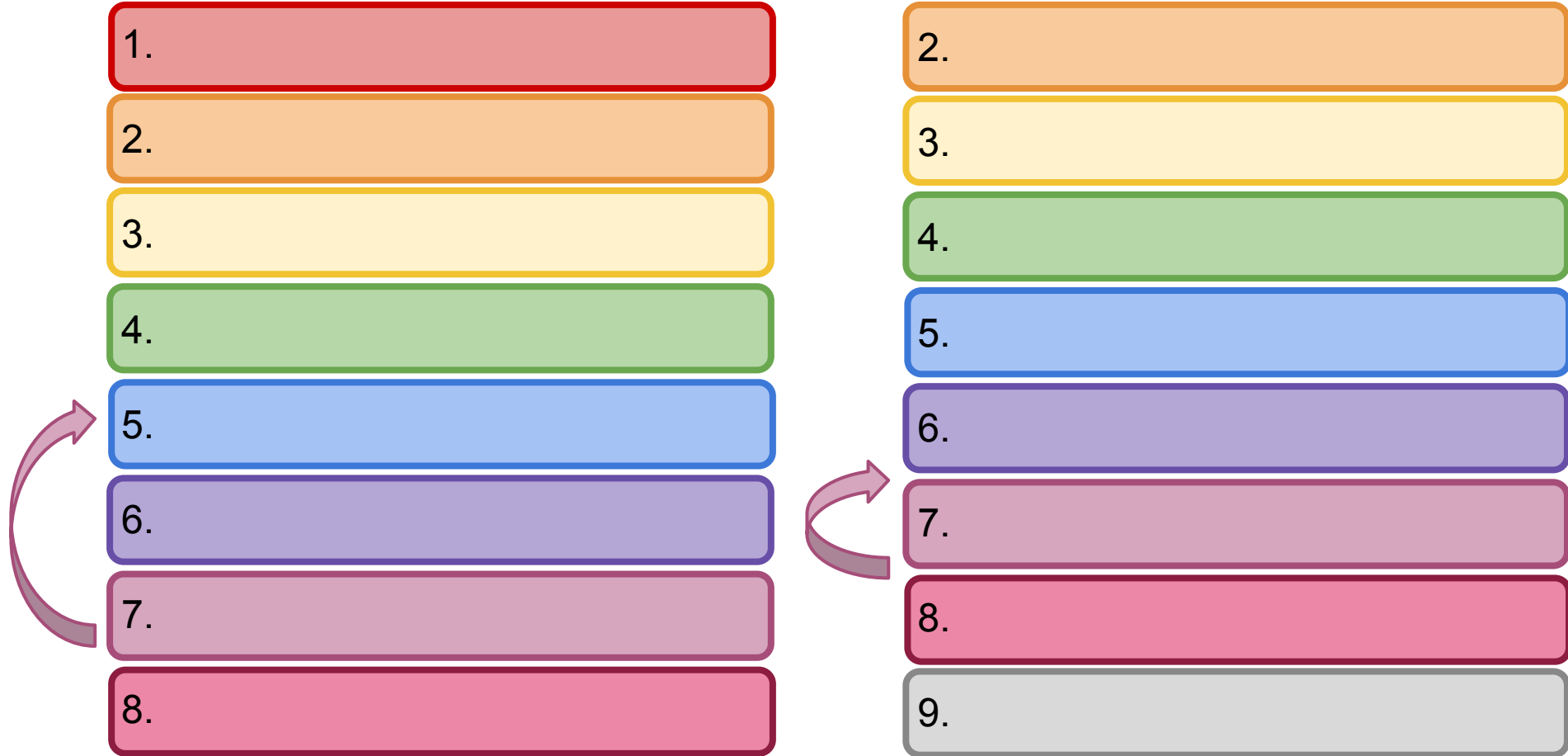
```
}
```

```
{  
    "header" : header contents,  
    "payload" : payload contents  
}
```

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*Check out the recording for the solution!*

## Socket Review



# Questions?

## Survey:

[https://bit.ly/asn\\_survey](https://bit.ly/asn_survey)





## Upcoming Events

### SI Sessions:

- Monday, October 30th, 2023 at 4:00 pm MST
- Thursday, November 2nd 2023 at 7:00 pm MST
- Sunday, November 5th 2023 at 7:00 pm MST

### Review Sessions:

- Must be **48 hours before** the final opens
- Final is typically available the last three days of class (11/29 - 12/1)
- Absolute last day to hold Review Session would be **Monday, November 27th**

I will be posting a poll concerning the Review Session schedule as we get closer!

# 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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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.

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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](#)