

# **Reusable Learning Object (RLO) ASAP**

**A Student-centered Adaptive Practice reviewing game**

**COMPSCI 890T**

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# Agenda

- ☐ Our RLO “ASAP” Overview and Goal
- ☐ How will Professor Reuse our RLO?
- ☐ How will Students Actively Learn?
- ☐ What are the Learning Outcome?
- ☐ Demo

# What is ASAP?

A Student-centered Adaptive Practice reviewing game

Online Quiz for  
Students to  
PRACTICE

Fun and  
very user-friendly



Like a simple  
'GRE Quantitative  
Adaptive Test'

Customizable for  
most types of courses

# Our RLO

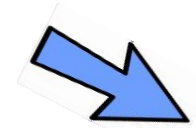
- ☒ 1. Reusable by Professor
- ☒ 2. Engages Students in Active Learning
- ☒ 3. Leads to specific Learning Outcomes

# How will Professor Reuse our RLO?

1. Update Quiz.csv
2. Click on Quiz.exe

Voila, that's it! Online Quiz is ready for Students to use...

quiz.csv - Excel										
File Home Insert Draw Page Layout Formulas Data Review View Add-ins Help Tell me what you want to do										
C20										
A	B	C	D	E	F	G	H	I		
1	id	section	question	A	B	C	D	key	explain	
2	1	1	How many distinct binary patterns are possible with 5 bits?	10	25	32	5!	C	$2^5=32$	
3	2	2	What day of the week is February 29, 2020?	Monday	Wednesday	Friday	Saturday	D	See page 17 of the Companion	
4	3	3	How many bits are in 4 kilobytes?	32768	4000	40000	32000	A	4 kilobytes x 1024 bytes per kilobyte	
5	4	4	Convert the decimal number 27 into base 10.	123	124	125	126	A	See page 38 of the Companion	
6	5	1	What is the closest named color to #7D1151?	Magenta	LawnGreen	Cyan	LightGray	B	See page 153 of the Companion	
7	6	2	What is the maximum unsigned number that can be stored in 5 bits?	30	31	32	33	B	$(2^5)-1 = 31$	
8	7	3	What is the decimal value of the hexadecimal number 0x217?	128	123	129	217	D	See page 41 of the Companion	
9	8	4	What is the sum of the complex numbers $4-7i$ and $3+7i$ ?	$4-7i$	$3+7i$	$7-4i$	$7+3i$	C	$5+2, -7i+3i = 7-4i$	
10	9	1	What is the math (non-computer) way to calculate $5x2 + 5x3i + -7ix2 + -7ix3i$ ?	78900	789000	7890000	7890	B	$2^5=32$	
11	10	2	What is the product of complex numbers $31+i$ and $30+i$ ?	$31+i$	$30+i$	$31+2i$	$31-i$	A	$5x2 + 5x3i + -7ix2 + -7ix3i = 10 + 15i$	
12	11	3	What is the maximum signed number that can be stored in 5 bits?	13	14	15	16	C	$(2^5-1)-1 = 15$	
13	12	4	What is the sum of the complex numbers $4-7i$ and $3+7i$ ?	$4-7i$	$3+7i$	$7-4i$	$7+3i$	C	$5+2, -7i+3i = 7-4i$	



```
{
  "1": {
    "sec": "1",
    "question": "How many distinct binary patterns are possible with 5 bits?",
    "choices": {
      "A": "10",
      "B": "25",
      "C": "32",
      "D": "5!"
    },
    "key": "C",
    "explain": "2^5=32"
  },
  "2": {
    "sec": "2",
    "question": "What day of the week is February 29, 2020?",
    "choices": {
      "A": "Monday",
      "B": "Wednesday",
      "C": "Friday",
      "D": "Saturday"
    },
    "key": "D",
    "explain": "See page 17 of the Companion"
  },
  "3": {
    "sec": "3",
    "question": "How many bits are in 4 kilobytes?",
    "choices": {
      "A": "32768",
      "B": "4000",
      "C": "40000",
      "D": "32000"
    },
    "key": "A",
    "explain": "4 kilobytes x 1024 bytes per kilobyte"
  }
}
```

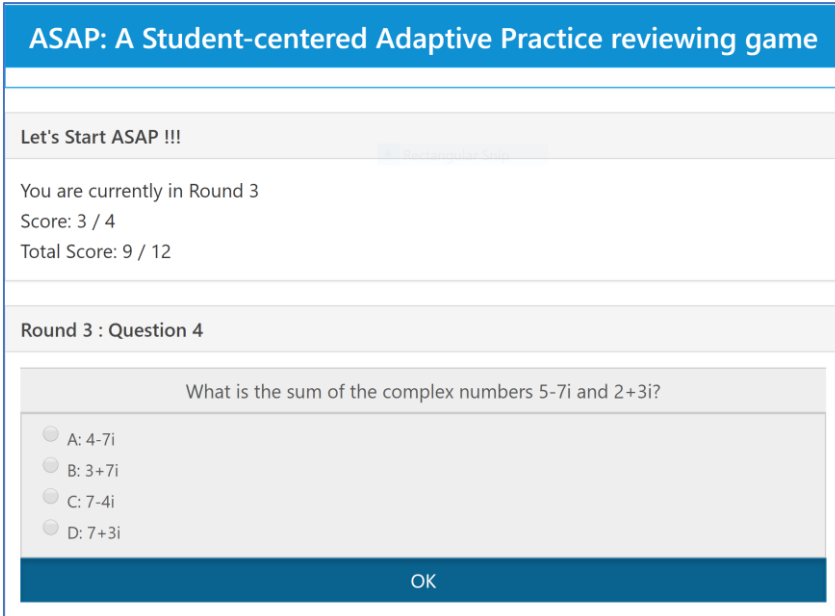
Professor creates the Quiz question (chooses the category for adaptive learning), then simply clicks on Quiz.exe.

This automatically creates the Quiz pool (json file), which is read by ASAP website



# How will Students Actively Learn?

1. Play ASAP anytime, anywhere
2. Practice, learn and Improve....



ASAP: A Student-centered Adaptive Practice reviewing game

Let's Start ASAP !!!

You are currently in Round 3  
Score: 3 / 4  
Total Score: 9 / 12

Round 3 : Question 4

What is the sum of the complex numbers  $5-7i$  and  $2+3i$ ?

- ☐ A:  $4-7i$
- ☐ B:  $3+7i$
- ☐ C:  $7-4i$
- ☐ D:  $7+3i$

OK

ASAP website adaptively selects the Quiz questions according to the Student's score

# What are the Learning Outcome?

- ☒ **Adaptive Learning** according to Student's score
- ☒ **Active Learning:** Student DO practice
- ☒ Gain interest in the course, improve **Attitude** (Fun!)
- ☒ Gain **Skills, Knowledge**, coding, course topics
- ☒ Learn problem solving, methods
- ☒ Learn NOT to be scared of Quiz
- ☒ Self-Check, Practice Anytime, Anywhere

# Demo

