Pre-Lecture 2

Due Aug 21 at 9am **Points** 14 **Questions** 14
Available until Aug 21 at 9am **Time Limit** None **Allowed Attempts** 2

Instructions

Take this quiz ***after you have watched the required videos and/or read the associated sections of the textbook***. See **Lecture 2: Representing numbers**.

You may attempt this quiz twice. Incorrect responses are marked after each attempt. Correct answers are revealed at the start of class for this lecture.

Carefully note the deadline for responses. Submissions are not accepted after the deadline, and there is no grace period.

This quiz was locked Aug 21 at 9am.

Attempt History

	Attempt	Time	Score
KEPT	**Attempt 2**	5 minutes	14 out of 14
LATEST	**Attempt 2**	5 minutes	14 out of 14
	Attempt 1	2,156 minutes	13.6 out of 14

Score for this attempt: **14** out of 14
Submitted Aug 20 at 10:44pm
This attempt took 5 minutes.

The following five questions assess your understanding of the ***C basics*** material covered in class for Lecture 1.

Question 1 1 / 1 pts

What is the ***exact*** default name of the executable program generated by the gcc compiler?

Correct!

a.out

orrect Answers

a.out

Question 2

1 / 1 pts

Which of the following format specifiers for printf is used to print an integer variable's value?

- %c
- %d
- %f
- %p
- %s

Correct!

Question 3

1 / 1 pts

Which of the following format specifiers for printf is used to print an integer variable's address?

- %c
- %d
- %f

Correct!

- (•) %p
- ( ) %s

Question 4

1 / 1 pts

Suppose that we have a pointer variable ***int* p***. Which of the following expressions give the value stored at the address represented by ***p***? (Select all that apply.)

- [ ] p
- [ ] &p

Correct!

- [x] p[0]
- [ ] p[1]

Correct!

- [x] *p

Correct!

- [x] *(p+0)
- [ ] *(p+1)

Question 5

1 / 1 pts

Suppose that we have the following C statements:

```
int arr[6] = { 4, 8, 15, 16, 23, 42 };
int* ptr = arr;
```

Which of the following expressions have a value that is unpredictable? (Select all that apply.)

Correct!

- [x] arr
- [ ] arr[5]

Correct!

- [x] arr[6]
- [ ] *ptr
- [ ] *(ptr + 5)

Correct!

- [x] *(ptr + 6)
- [ ] *ptr + 6

The following nine questions assess your understanding of the ***representing numbers*** material covered in the videos as well as Chapter 2 of the textbook.

Question 6

1 / 1 pts

Give the ***exact*** 8-bit unsigned binary representation of decimal value 144.

Correct!

10010000

orrect Answers

10010000

Question 7

1 / 1 pts

What signed decimal integer is represented by 8-bit two's complement binary 11110110?

Correct!

-10

orrect Answers

-10

Question 8

1 / 1 pts

Fill in the blank to make the expression x * ___ equivalent to the following C expression :

```
(x << 3) + (x << 1)
```

Correct!

10

orrect Answers

10

Question 9

1 / 1 pts

Suppose that we have the following C statements:

```
int i = -1;
unsigned int u = i;
```

The value of ***u*** is negative.

- True
- False

Correct!

Question 10

1 / 1 pts

In floating-point representation, the denormalized numbers are uniformly spaced, while the normalized numbers are not uniformly spaced.

Correct!

- (•) True
- ( ) False

Question 11

1 / 1 pts

Suppose that we need to represent the decimal value -1.5 as a ***normalized*** single-precision floating point number. Fill the the blanks:

-1.5 =-M * 2^E = -(0.5 + 1) * 2 0

sign bit: 1

exponent ***e***, expressed in exactly 8 bits: 01111111 (HINT: The value in the second blank above is the same as ***e*** - 127.)

fraction ***f***, expressed in exactly 23 bits: 10000000000000 (HINT: The value in the first blank above is the same as ***f*** / 2^{23})

Answer 1:

Correct!

0.5

orrect Answer

.5

orrect Answer

1/2

Answer 2:

Correct!

0

Answer 3:

Correct! 1

Answer 4:

Correct! 01111111

Answer 5:

Correct! 10000000000000000000

Question 12

1 / 1 pts

Into which of the following categories of floating-point numbers does the single-precision representation 0x803fffff fall?

- normalized
- Correct! denormalized
- infinity
- not a number

Question 13

1 / 1 pts

Give the ***exact*** single-precision floating point representation for negative infinity, using hexadecimal.

0x ff800000

Answer 1:

Correct! FF800000

orrect Answer ff800000

Question 14

1 / 1 pts

If we were looking at the bytes stored in memory to determine the value of a variable, for which of the following data types would we need to know the endian-ness of our machine? (Select all that apply.)

- [ ] char
- [x] float
- [x] int

Correct!

Correct!

Quiz Score: **14** out of 14