Midterm 2 Study Guide

Due No due date

Points 25

Questions 25

Time Limit 30 Minutes

Allowed Attempts Unlimited

Take the Quiz Again

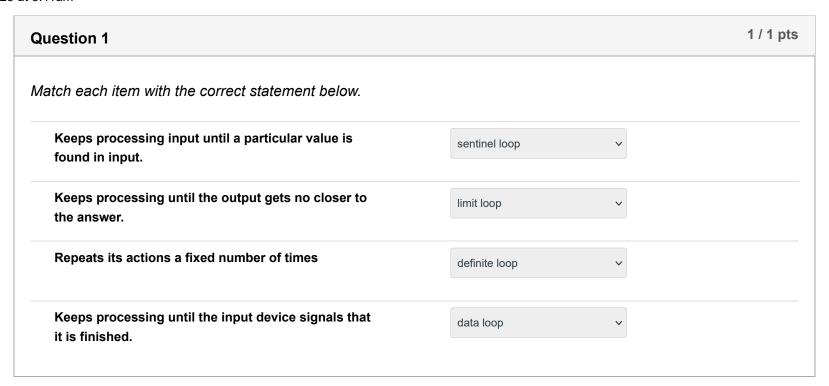
Attempt History

	Attempt	Time	Score	
KEPT	Attempt 7	28 minutes	21 out of 25	
LATEST	Attempt 10	30 minutes	20.17 out of 25	
	Attempt 9	29 minutes	20 out of 25	
	Attempt 8	29 minutes	20.5 out of 25	
	Attempt 7	28 minutes	21 out of 25	
	Attempt 6	24 minutes	21 out of 25	
	Attempt 5	20 minutes	17.83 out of 25	
	Attempt 4	30 minutes	17.67 out of 25	
	Attempt 3	22 minutes	16 out of 25	
	Attempt 2	16 minutes	16.17 out of 25	
	Attempt 1	30 minutes	18.33 out of 25	

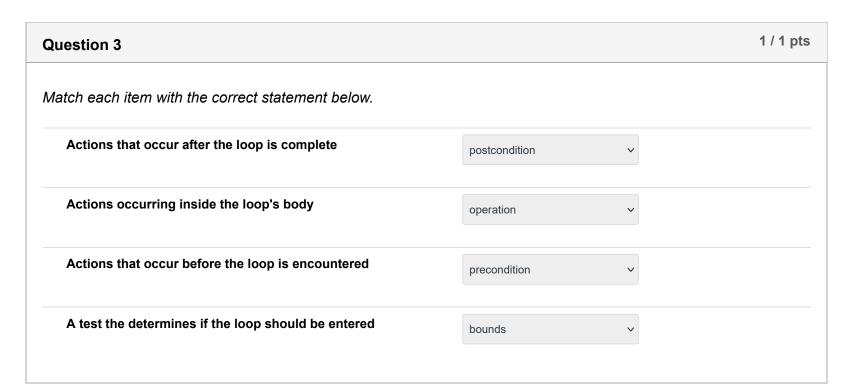
① Correct answers are hidden.

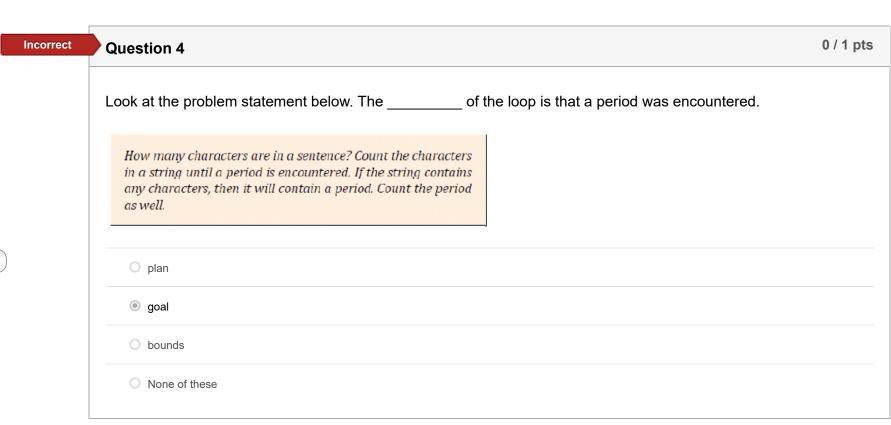
Submitted Jun 28 at 3:11am



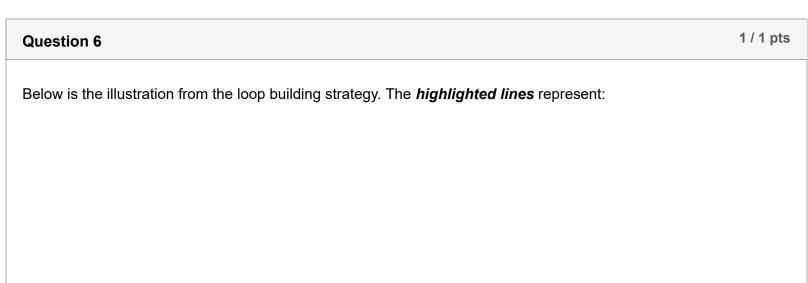


Question 2	1 / 1 pts	
Which line advances the loop?		
<pre>1. string s("Hello CS 150"); 2. while (s.size()) 3. { 4. if (s.at(0) == 'C') break; 5. s = s.substr(1); 6. } 7. cout << s << endl;</pre>		
5		
O 4		
O None of these		
O 2		









```
Given: the variable str is a string (may be empty)
Create the counter variable, initialized to {	ext{-}}1
If the variable str has any characters then
    Set counter to 0
    Create the variable current-character as a character
    Place the first character in str into current-character
    While more-characters and current-character not a period
        Add one to (or increment) the counter variable
       Store the next character from str in current-character
    If current-character is a period then
       Add one to the counter to account for the period.
    Else
      Set counter to -2
If counter is -1 the string was empty
Else if counter is -2 there was no period

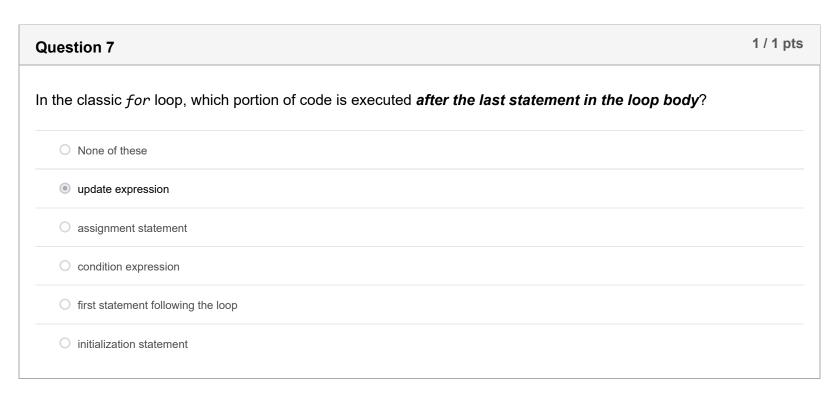
    goal precondition

loop bounds

    loop postcondition

advancing the loop
goal operation

    bounds precondition
```



```
Question 9

What prints?

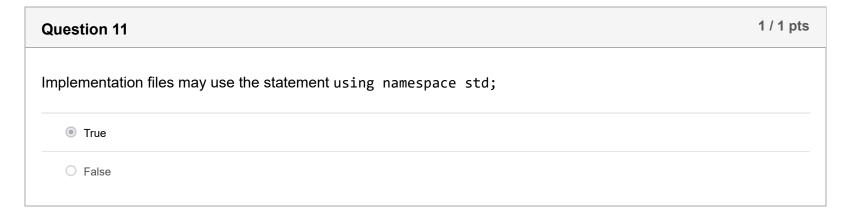
string str = "Hello";
for (auto i = 0, len = str.size(); i < len; i++)
    cout << str.at(i);</pre>
```



Incorrect

○ Hell	
○ Hello	
O Crashes when run	
Does not compile	
O Undefined behavior	

Partial	Question 10	0.5 / 1 pts
	Which of these documentation tags are used in a <i>function comment?</i>	
	□ @file	
	☐ @version	
	☑ @param	



```
Question 13

What is the output of the following?

int i = 0;
while (i != 9)
{
    cout << i << " ";</pre>
```

•

Question 14	1 / 1 pts
What prints here?	
<pre>auto a = 3, b = 3; cout << (a != b ? "panda": "tiger") << endl;</pre>	
O Undefined behavior	
● tiger	
O Does not compile	
O Crashes when run	
O panda	

Question 15	1 / 1 pts
An <i>undefined</i> error message is a linker error.	
True	
○ False	

```
Question 17

What is the output of the following?

bool token = false;
while (token)
1/1 pts
```



}	<pre>cout << "Hello World!" << endl;</pre>
	No output
	O Hello World!
	Hello World! will be displayed infinitely many times
	O No output because of compilation error

Question 18	1 / 1 pts
If an output stream's file is missing when you try to open it, its fail() member function returns false.	
True	
○ False	

Incorrect Question 19 0 / 1 pts



Two quantities a and b are said to be in the *golden ratio* if $\frac{(a+b)}{a}$ is equal to $\frac{a}{b}$. Assuming a and b are line segments, the *golden section* is a line segment divided according to the golden ratio: The total length (a+b) is to the longer segment a as a is to the shorter segment b. One way to calculate the golden ratio is through the continued square root (also called an *infinite surd*): golden ratio = $\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+\cdots}}}}$. In a recursive implementation of this function, what should be the *base case* for the recursion?

```
    if (number <= 1) { return sqrt(number);}

    if (number <= 1) { return pow(number, 2.0);}

    if (number <= 1) { return 1.0;}

    if (number <= 1) { return 0.0;}
</pre>
```

Assume the user types "brown cow" when this code runs. What prints?

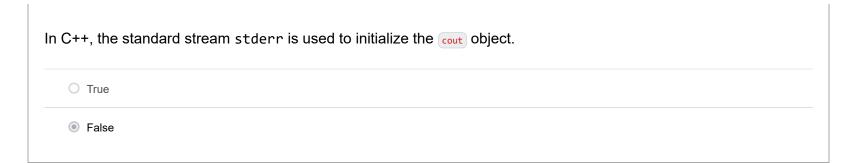
char c;
cout << cin.get(c) << endl;

brown cow

true (or 1)

Does not compile

Question 21	1 / 1 pts



Question 22	1 / 1 pts
Examine the code below:	
<pre>int mystery3(int n) { if (n < 2) return 1; return n * mystery3(n - 1); }</pre>	
☑ In mysterm3, if (n < 2) is a base case	
wystery3 correctly implements the Fibonacci algorithm	
✓ mystery3 is efficient	
mystery3 returns the correct answer for all inputs	
mystery3 is an implementation of the Factorial algorithm. It completes for all inputs, but negative inputs produce the wrong output. It is efficient and it is not a wrapper. if (n < 2) is a base case.	g

Question 23	1 / 1 pts
The redirection pipe symbol is a pair of vertical bars ().	
O True	
False	

Question 24	1 / 1 pts
This loop:	
<pre>char c; while (in.get(c)) { cout << c << endl; }</pre>	
○ is an endless loop	
illustrates token-based stream processing	
○ illustrates line-based stream processing	
O has a syntax error	
illustrates raw character I/O illustrates raw character I/O	



Partial	Question 25	0.67 / 1 pts
	Which of the following symbol(s) can be used to redirect the output to a file or another program?	
	□ >>	
	□ <<	

