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 11	29 minutes	25 out of 25
LATEST	Attempt 17	19 minutes	24 out of 25
	Attempt 16	21 minutes	24 out of 25
	Attempt 15	30 minutes	23 out of 25
	Attempt 14	22 minutes	24 out of 25
	Attempt 13	25 minutes	24 out of 25
	Attempt 12	30 minutes	22 out of 25
	Attempt 11	29 minutes	25 out of 25
	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

ⓘ Correct answers are hidden.

Submitted Jun 29 at 3:26pm

Question 1

1 / 1 pts

Loops are used to implement iteration in C++.

- (●) True
- ( ) False

Question 2

1 / 1 pts

How many times is this loop ***entered***? (*That is, how many times is i printed?*)

```
for (int i = 0; i <= 10; i++)
    cout << i;
cout << endl;
```

- 10
- 9
- 11
- Never

Question 3

1 / 1 pts

Below is the illustration from the loop building strategy. The ***highlighted lines*** represent. Add one to (or increment) the counter variable:

```
Given: the variable str is a string (may be empty)
Create the counter variable, initialized to -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
- advancing the loop
- bounds precondition
- loop bounds
- loop postcondition
- goal operation

Question 4

1 / 1 pts

The highlighted section below illustrates.
If the variable str has any characters then:

```
Given: the variable str is a string (may be empty)
Create the counter variable, initialized to -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
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    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
```

- ○ a boundary condition
- ◉ a loop guard
- ○ a necessary condition
- ○ None of these
- ○ an intentional condition
- ○ a postcondition

Question 5

1 / 1 pts

The highlighted section below illustrates.
current-character not a period:

```
Given: the variable str is a string (may be empty)
Create the counter variable, initialized to -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
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    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
```

- ○ a necessary condition
- ○ a postcondition
- ○ None of these
- ◉ an intentional condition
- ○ a boundary condition

a loop guard

Question 6

0 / 1 pts

Which line ***advances the loop***?

```
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;
```

- 5
- 4
- 2
- None of these

Question 7

1 / 1 pts

In the classic *for* loop, which portion of code is not followed by a semicolon?

- condition expression
- update expression
- initialization statement
- None of these

Question 8

1 / 1 pts

Match each item with the correct question below.

What must I change in the test to go to the next iteration?	advance the loop
What must I do to enter the loop?	bounds precondition
Has my loop reached its goal?	loop postcondition
Can my loop be entered at all?	

loop guards

Question 9

1 / 1 pts

Loop bounds used when searching through input.

- None of these
- limit bounds
- sentinel bounds
- data bounds

Question 10

1 / 1 pts

Different functions that have the same name, but take different arguments, are said to be:

- overridden
- derived
- overloaded
- covariant
- default

Question 11

1 / 1 pts

Match each item with the correct statement below.

Meaning of value returned from a function	@return
Begin a block of source code	@code
Information about the library	@version
Name and meaning for a parameter	@param

Question 12

1 / 1 pts

Which prototypes in the following header file contain errors?

```
#ifndef EXAMPLE_H
#define EXAMPLE_H
#include <string>

std::string f1(int a);
int f2(double);
void f3(std::string& s, int n);
double f4();

#endif
```

- [ ] *f4*
- [ ] *f1*
- [ ] *f3*
- [ ] *f2*
- [x] None of these

Question 13

1 / 1 pts

The pattern of parameter types and order is called the function's:

- ( ) alias
- ( ) interface
- (•) signature
- ( ) type

Question 14

1 / 1 pts

To allow *f()* to accept the argument passed here, the parameter *str* should be declared as:

```
void f( . . . str);
int main()
{
    f("hello");
}
```

- ( ) const string
- ( ) string

- [x] `const string&`
- [ ] `string&`
- [ ] It is not possible for `f()` to change the argument passed here.

Question 15

1 / 1 pts

What is the output of the following?

```
bool token = false;
while (token)
{
    cout << "Hello World!" << endl;
}
```

- [ ] No output because of compilation error
- [ ] Hello World! will be displayed infinitely many times
- [x] No output
- [ ] Hello World!

Question 16

1 / 1 pts

An ***undeclared*** error message is a linker error.

- [ ] True
- [x] False

Question 17

1 / 1 pts

What prints here?

```
auto a = 2;
switch (a)
{
    case 1: cout << "1"; break;
    case 2: cout << "2"; break;
    default: cout << "3";
}
cout << endl;
```

- [ ] 3
- [x] 2

- Does not compile
- `123`
- `1`

Question 18

1 / 1 pts

The `cout` object is an instance of the `ostream` class.

- (•) True
- ( ) False

Question 19

1 / 1 pts

This command: `cat < nofile > /dev/null` will print an error message on the screen if `nofile` does not exist.

- (•) True
- ( ) False

Question 20

1 / 1 pts

To use a disk file as a data stream source or sink, use the `<ifstream>` header

- ( ) True
- (•) False

Question 21

1 / 1 pts

To read a line of text, you include the header file `<string>`.

- (•) True
- ( ) False

Question 22

1 / 1 pts

Redirect standard error using the symbol 1> like this:

- True
- False

Question 23

1 / 1 pts

Which line runs the `dwk` program and gets its input from a file named `y.data`?

- `./dwk < y.data`
- `./dwk >> y.data`
- `./dwk << y.data`
- None of these
- `./dwk > y.data`
- `./dwk | y.data`

Question 24

1 / 1 pts

Match the following code the the answers below.

```
template <typename T, typename U>
U pickle(T& a, const U& b) {
    a += b;
    return b;
}

int main()
{
    int x = 42;
    auto a = pickle(x, 4.5);
    cout << a << endl;
    cout << x << endl;
}
```

Inside main, the variable a is type: double

Inside main, the value printed for a is: 4.5

Inside main, the value printed for x is: 46

Question 25

1 / 1 pts

Which of these ***are not*** state filters?

- [x] search for a particular value in a stream
- [ ] compress input by turning off echo when reading blank spaces
- [ ] print one sentence per line
- [x] copy a file
- [x] translating data from one form to another
- [ ] counting word transitions