

More Output

CS 124 – Intro to Software Development

Macbeth – Lesson 2.2

Agenda

- Opening Prayer
- Spiritual Thought
- Q&A
 - Review Assignment
 - Review Next Project
- Quiz Review
- Generating More Output
- Looking Ahead

Spiritual Thought

"The graduates will be at personal peace by having kept the commandments. They will be natural leaders who know how to teach and how to learn. They will have the power to innovate and improve without requiring more of what money can buy. Those graduates of BYU-Idaho will become, and this is a prophecy that I am prepared to make and make solemnly, those graduates of BYU-Idaho will become legendary for their capacity to build the people around them and to add value wherever they serve."

- President Henry B. Eyring



Review Last Assignment

- What was the hardest part?
- How did you solve it?
- When I share my code on the screen, please do not take pictures 😊

02 Ponder – Monthly Budget Project

This program keeps track of your monthly budget
Please enter the following:

Your monthly income: 1000.00
Your budgeted living expenses: 650.00
Your actual living expenses: 700.00
Your actual taxes withheld: 100.00
Your actual tithe offerings: 120.00
Your actual other expenses: 150.00

The following is a report on your monthly expenses

Item	Budget	Actual
Income	\$ 1000.00	\$ 1000.00
Taxes	\$ 0.00	\$ 100.00
Tithing	\$ 0.00	\$ 120.00
Living	\$ 650.00	\$ 700.00
Other	\$ 0.00	\$ 150.00
Difference	\$ 0.00	\$ 0.00

Book Quiz

Which of the following puts a newline on the screen in C++?

A

```
cout << "\n";
```

Correct!

B

```
cout << "/n";
```

The slash should “hit the n in the foot”

C

```
cout << "newline";
```

This will put the text “newline”

D

```
cout << endl;
```

Correct!

Book Quiz

How do you right-align numbers in C++?

A

```
cout << rightAlign() << 5 << endl;  
cout << rightAlign() << 555 << endl;
```

Compile error, there is no such thing as `rightAlign()`

B

```
cout << "\t" << 5 << endl;  
cout << "\t" << 555 << endl;
```

```
5  
555
```

C

```
cout << setw(5) << 5 << endl;  
cout << setw(5) << 555 << endl;
```

```
5  
555
```

D

```
cout << right() << 5 << endl;  
cout << right() << 555 << endl;
```

Compile error. There is no such thing as `right()`

Book Quiz

What will be the output of the following code?

```
{  
    cout << "\\taa\\n";  
    cout << "aa\\taa\\n";  
}
```

A

```
\\taa  
aa\\taa
```

```
cout << "\\taa\\n";  
cout << "aa\\taa\\n";
```

B

```
aa      aa  
aa      aa
```

```
cout << "      aa\\n";  
cout << "aa      aa\\n";
```

C

```
\\taa\\naa\\taa\\n
```

```
cout << "\\taa\\n";  
cout << "aa\\taa\\n";
```

D

```
aa      aa  
aa      aa
```

```
cout << "\\taa\\n";  
cout << "aa\\taa\\n";
```


Book Quiz

Write the `cout` code to generate the following output

```
/\\  
\\
```

```
cout << "/\\  
cout << "\\
```

Book Quiz

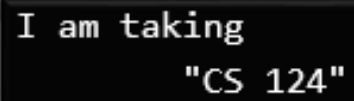
What is the output of the following code?

```
{  
    cout << "\\t1\\t2\\t3\\n\\t4\\t5\\t6\\n\\t7\\t8\\t9\\n";  
}
```

1	2	3
4	5	6
7	8	9

Book Quiz

Write the `cout` code to generate the following output



```
I am taking
      "CS 124"
```

```
cout << "I am taking\n";
cout << "\t\"CS 124\\\"\\n";
```

Weather Table

Create a table that will look like the following:

Weather Observations

Station	Temp	Wind Speed \ Gust
=====	=====	=====
KZO	101.0	8.0 \ 9.2
ORD	97.3	25.1 \ 30.3
RXE	80.1	33.2 \ 42.1

Weather Table

Weather Observations

Station	Temp	Wind Speed \	Gust
=====	=====	=====	=====
KZO	101.0	8.0 \	9.2
ORD	97.3	25.1 \	30.3
RXE	80.1	33.2 \	42.1

setw(6) setw(10) setw(4)

2 spaces " \ " (with a space before and after)

Weather Table

Weather Observations

Station	Temp	Wind Speed \ Gust
=====	=====	=====
KZO	101.0	8.0 \ 9.2
ORD	97.3	25.1 \ 30.3
RXE	80.1	33.2 \ 42.1

```
cout.precision(1);
cout.setf(ios::fixed);
cout.setf(ios::showpoint);
```

setw(6) setw(10) setw(4)

2 spaces " \ \"

```
cout << "Station    Temp    Wind Speed \\ Gust\n";
cout << "=====  =====  =====\n";
cout << "KZO      "
    << setw(6) << 101.0 << "    "
    << setw(10) << 8.0 << "  \\  "
    << setw(4) << 9.2 << endl;
```

Tic Tac Toe

Write code to display the following Tic Tac Toe board using tabs.

```
      |      |
      |      |
-----*-----*-----
      |      |
      |      |
-----*-----*-----
      |      |
      |      |
```

Tic Tac Toe

Write code to display the following Tic Tac Toe board using tabs.

```
  |   |  
  |   |  
--*--*--  
  |   |  
  |   |  
--*--*--  
  |   |  
  |   |
```

← `cout << "\\t|\\t|\\n";`

Looking Forward

- Before Class on Friday
 - 1.2 Prepare
 - Read Chapter 1.2 Input & Variables
 - Submit assign12
 - 02 Ponder – Output table completed and formatted correctly
- Saturday End of Day
 - 02 Ponder – Monthly Budget Due at 11:59pm