COP 2535: Data Structures

Quiz 01

Instructions

Answer the following questions in writing. These are short answer questions. Upload your answers in Canvas as plain text. Please include your name in the text.

Quiz

1. What is a memory address? What is its purpose?

2. What is an algorithm?

3. What are the three primary activities of a program?

4. What is software engineering?

5. Which of the following are illegal C++ variable names, and why?

```
x
99bottles
july97
theSalesFigureForFiscal2023
r&d
grade_report
```

6. What will the following code display?

```
int number;
number = 3.625;
cout << number;
```

7. Assuming that the `char` datatype uses one byte of memory, how many bytes do each of the following literals use?

```
'Q'
"q"
"Sales"
'\n'
```

8. What will be assigned to `x` in the following statements?

```
x = 8 + 3
x = 8 - 3
x = 8 * 3
x = 8 / 3
x = 8 % 3
```

9. What will be the type of the following variables?

```
auto item = 42;
auto phi = 1.618;
auto isTrue = 0;
auto initial = 'X';
```

10. What is meant by a variable's scope?