

Midterm exam - CS5000 (October 1, 2017)

Name: _____

Question:	1	2	3	4	5	6	Total
Points:	10	10	15	15	30	30	110
Score:							

1. (10 points) Write Java code to create a variable of type String, called school, and initialize it to the name of our school
2. (10 points) Given the following code fragment, what would be the value of ans at the end ?

```
int a=10, b=a+1;  
++a;  
b *=2;  
a+=b;  
ans = b-a;
```
3. (15 points) Write a java function called times, that takes two integers and returns an integer, the result of multiplying its two parameters

- (15 points) Using a case statement, write a java function called seasons, that takes an int and returns a string, and converts numbers from 0-3 into the seasons of the year (0=Spring, 1=Summer, 2=Fall, 3=Winter)
- (30 points) Using recursion (no loops allowed) write a function called PrintByStep, that takes three parameters, a PrintStream and an two ints(say, low and high). The function prints to the printstream all numbers from low to high, incrementing by 5 (so, for example, PrintByStep(System.out, 1,15) would print 1,6,11). You may need to define a recursion function with extra parameters and call it.

6. (30 points) Using recursion (no loops allowed) write a function called `stringContains` that takes two parameters, a `String` and a `char` ; `stringContains` returns `true` if the string contains the character, `false` otherwise. Hint - You can assume there are functions `first`, that takes a string and returns a `char`, and `rest`, that take a string and returns the string without the first character OR define a function that takes 3 parameters and use `charAt` and `length` (and call it)

Total questions: 6 Total points: 110