CSE 2100 – Data Structures & Analysis of Algorithms

Lab #1 – Recursion

Labs are evaluated along axes of correctness, design, and style, with scores ordinarily computed as 3 × correctness + 2 × design + 1 × style.

1. Write a recursive function called `sigma` with a prototype of

   ```
   int sigma (int n);
   ```

   that adds the numbers 1 through n and returns the sum.

   e.g.
   ```
   Enter a positive integer: 5
   Sigma = 15
   ```

2. Write a recursive binary search function called `search` with a prototype of

   ```
   bool search(int n, int array[], int lower, int upper);
   ```

   that returns `true` if `n` is found in `array` and `false` otherwise.

3. Write a recursive print function called `print_backwards` with a prototype of

   ```
   void print_backwards (char* s);
   ```

   that accepts a string as input.