Clayton Walker

COP 4020

Assignment 1

Due: 2/2/14

**Explanation for HW1partA:**

The results for this solution were that the Consumers 1 and 2 would take turns consuming products as the producer consumes them, as they are running concurrently. The semaphores determine which consumer’s turn it is to consume items. The empty and full semaphores are necessary.

**Output for HW1partA:**

Source file: HW1partA.cm Sun Feb 2 15:25:46 2014

Executing PCODE ...

Item 1 produced

Item 1 consumed by C1

Item 2 produced

Item 3 produced

Item 2 consumed by C2

Item 4 produced

Item 3 consumed by C1

Item 4 consumed by C2

Item 5 produced

Item 5 consumed by C1

Item 6 produced

Item 6 consumed by C2

Item 7 produced

Item 7 consumed by C1

Item 8 produced

Item 9 produced

Item 8 consumed by C2

Item 10 produced

Item 11 produced

Item 9 consumed by C1

Item 12 produced

Item 10 consumed by C2

Item 13 produced

Item 11 consumed by C1

Item 12 consumed by C2

Item 14 produced

Item 13 consumed by C1

Item 15 produced

Item 16 produced

Item 14 consumed by C2

Item 17 produced

Item 18 produced

Item 19 produced

Item 15 consumed by C1

Item 20 produced

Item 16 consumed by C2

Item 21 produced

Item 22 produced

Item 17 consumed by C1

Item 23 produced

Item 18 consumed by C2

Item 24 produced

Item 19 consumed by C1

Item 25 produced

Item 20 consumed by C2

Item 26 produced

Item 21 consumed by C1

Item 27 produced

Item 22 consumed by C2

Item 28 produced

Item 23 consumed by C1

Item 29 produced

Item 24 consumed by C2

Item 30 produced

Item 25 consumed by C1

Item 31 produced

Item 26 consumed by C2

Item 32 produced

Item 27 consumed by C1

Item 33 produced

Item 28 consumed by C2

Item 34 produced

Item 29 consumed by C1

Item 35 produced

Item 30 consumed by C2

Item 36 produced

Item 31 consumed by C1

Item 37 produced

Item 32 consumed by C2

Item 38 produced

Item 33 consumed by C1

Item 39 produced

Item 34 consumed by C2

Item 40 produced

Item 35 consumed by C1

Item 41 produced

Item 36 consumed by C2

Item 42 produced

Item 37 consumed by C1

Item 38 consumed by C2

Item 43 produced

Item 44 produced

Item 39 consumed by C1

Item 45 produced

Item 40 consumed by C2

Item 46 produced

Item 41 consumed by C1

Item 47 produced

Item 42 consumed by C2

Item 48 produced

Item 43 consumed by C1

Item 44 consumed by C2

Item 49 produced

Item 45 consumed by C1

Item 50 produced

Item 46 consumed by C2

Item 51 produced

Item 47 consumed by C1

Item 52 produced

Item 48 consumed by C2

Item 53 produced

Item 49 consumed by C1

Item 54 produced

Item 55 produced

Item 50 consumed by C2

Item 56 produced

Item 51 consumed by C1

Item 52 consumed by C2

Item 57 produced

Item 53 consumed by C1

Item 58 produced

Item 54 consumed by C2

Item 59 produced

Item 55 consumed by C1

Item 60 produced

Item 56 consumed by C2

Item 61 produced

Item 57 consumed by C1

Item 62 produced

Item 58 consumed by C2

Item 63 produced

Item 59 consumed by C1

Item 64 produced

Item 60 consumed by C2

Item 65 produced

Item 66 produced

Item 61 consumed by C1

Item 67 produced

Item 62 consumed by C2

Item 68 produced

Item 63 consumed by C1

Item 69 produced

Item 64 consumed by C2

Item 70 produced

Item 65 consumed by C1

Item 71 produced

Item 66 consumed by C2

Item 72 produced

Item 67 consumed by C1

Item 73 produced

Item 68 consumed by C2

Item 69 consumed by C1

Item 74 produced

Item 75 produced

Item 70 consumed by C2

Item 76 produced

Item 71 consumed by C1

Item 77 produced

Item 72 consumed by C2

Item 78 produced

Item 73 consumed by C1

Item 79 produced

Item 74 consumed by C2

Item 80 produced

Item 75 consumed by C1

Item 81 produced

Item 76 consumed by C2

Item 82 produced

Item 77 consumed by C1

Item 83 produced

Item 78 consumed by C2

Item 84 produced

Item 79 consumed by C1

Item 85 produced

Item 80 consumed by C2

Item 81 consumed by C1

Item 86 produced

Item 82 consumed by C2

Item 87 produced

Item 83 consumed by C1

Item 88 produced

Item 84 consumed by C2

Item 89 produced

Item 85 consumed by C1

Item 90 produced

Item 86 consumed by C2

Item 91 produced

Item 92 produced

Item 87 consumed by C1

Item 93 produced

Item 88 consumed by C2

Item 94 produced

Item 89 consumed by C1

Item 95 produced

Item 90 consumed by C2

Item 96 produced

Item 91 consumed by C1

Item 97 produced

Item 92 consumed by C2

Item 93 consumed by C1

Item 98 produced

Item 94 consumed by C2

Item 99 produced

Item 100 produced

Item 95 consumed by C1

Item 96 consumed by C2

Item 97 consumed by C1

Item 98 consumed by C2

Item 99 consumed by C1

Item 100 consumed by C2

Main program finishing, Producer and Consumers have run to completion.

**Explanation for HW1partB:**

Same as part A, but introduced a time delay in one of the consumers. Added an inane loop that iterates an arbitrary number of times in consumer2() function.

**Output for HW1partB:**

Source file: HW1partB.cm Sun Feb 2 15:50:26 2014

Executing PCODE ...

Item 1 produced

Item 2 produced

Item 1 consumed by C1

Item 3 produced

Item 4 produced

Item 2 consumed by C1

Item 5 produced

Item 6 produced

Item 3 consumed by C1

Item 7 produced

Item 8 produced

Item 4 consumed by C1

Item 9 produced

Item 10 produced

Item 5 consumed by C1

Item 6 consumed by C1

Item 11 produced

Item 7 consumed by C1

Item 12 produced

Item 13 produced

Item 8 consumed by C1

Item 14 produced

Item 9 consumed by C1

Item 15 produced

Item 10 consumed by C1

Item 16 produced

Item 11 consumed by C1

Item 17 produced

Item 12 consumed by C1

Item 18 produced

Item 13 consumed by C1

Item 14 consumed by C1

Item 19 produced

Item 15 consumed by C1

Item 20 produced

Item 21 produced

Item 16 consumed by C1

Item 22 produced

Item 17 consumed by C1

Item 23 produced

Item 18 consumed by C1

Item 24 produced

Item 19 consumed by C1

Item 25 produced

Item 20 consumed by C1

Item 21 consumed by C1

Item 26 produced

Item 27 produced

Item 22 consumed by C1

Item 28 produced

Item 23 consumed by C1

Item 29 produced

Item 24 consumed by C1

Item 30 produced

Item 25 consumed by C1

Item 31 produced

Item 26 consumed by C1

Item 32 produced

Item 27 consumed by C1

Item 33 produced

Item 28 consumed by C1

Item 34 produced

Item 29 consumed by C1

Item 35 produced

Item 30 consumed by C1

Item 36 produced

Item 31 consumed by C1

Item 37 produced

Item 32 consumed by C1

Item 38 produced

Item 33 consumed by C1

Item 39 produced

Item 34 consumed by C1

Item 40 produced

Item 35 consumed by C1

Item 41 produced

Item 36 consumed by C1

Item 42 produced

Item 37 consumed by C1

Item 43 produced

Item 38 consumed by C1

Item 44 produced

Item 39 consumed by C1

Item 45 produced

Item 40 consumed by C1

Item 46 produced

Item 41 consumed by C1

Item 47 produced

Item 42 consumed by C1

Item 48 produced

Item 43 consumed by C1

Item 49 produced

Item 44 consumed by C1

Item 50 produced

Item 45 consumed by C1

Item 51 produced

Item 46 consumed by C1

Item 52 produced

Item 47 consumed by C1

Item 53 produced

Item 48 consumed by C1

Item 49 consumed by C1

Item 54 produced

Item 55 produced

Item 50 consumed by C1

Item 56 produced

Item 51 consumed by C1

Item 57 produced

Item 52 consumed by C1

Item 58 produced

Item 53 consumed by C1

Item 59 produced

Item 54 consumed by C1

Item 60 produced

Item 55 consumed by C1

Item 56 consumed by C1

Item 61 produced

Item 62 produced

Item 57 consumed by C1

Item 58 consumed by C1

Item 63 produced

Item 59 consumed by C1

Item 64 produced

Item 60 consumed by C1

Item 65 produced

Item 66 produced

Item 61 consumed by C1

Item 67 produced

Item 62 consumed by C1

Item 63 consumed by C1

Item 68 produced

Item 69 produced

Item 64 consumed by C1

Item 65 consumed by C1

Item 70 produced

Item 71 produced

Item 66 consumed by C1

Item 72 produced

Item 67 consumed by C1

Item 73 produced

Item 68 consumed by C1

Item 74 produced

Item 69 consumed by C1

Item 70 consumed by C1

Item 75 produced

Item 76 produced

Item 71 consumed by C1

Item 72 consumed by C1

Item 77 produced

Item 73 consumed by C1

Item 78 produced

Item 79 produced

Item 74 consumed by C1

Item 80 produced

Item 75 consumed by C1

Item 81 produced

Item 76 consumed by C1

Item 82 produced

Item 77 consumed by C1

Item 83 produced

Item 78 consumed by C1

Item 79 consumed by C1

Item 84 produced

Item 85 produced

Item 80 consumed by C1

Item 86 produced

Item 81 consumed by C1

Item 87 produced

Item 82 consumed by C1

Item 83 consumed by C1

Item 88 produced

Item 89 produced

Item 84 consumed by C1

Item 90 produced

Item 85 consumed by C1

Item 91 produced

Item 86 consumed by C1

Item 92 produced

Item 87 consumed by C1

Item 93 produced

Item 88 consumed by C1

Item 94 produced

Item 89 consumed by C1

Item 95 produced

Item 90 consumed by C1

Item 96 produced

Item 91 consumed by C1

Item 92 consumed by C1

Item 97 produced

Item 93 consumed by C1

Item 98 produced

Item 94 consumed by C1

Item 99 produced

Item 95 consumed by C1

Item 100 produced

Item 96 consumed by C1

Item 97 consumed by C1

Item 98 consumed by C1

Item 99 consumed by C1

Item 100 consumed by C1

Main program finishing, Producer and Consumers have run to completion.