# Solution for Homework Assignment 4 (Part B and C): CS 202 

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## Part B: Understanding Variables in Scratch (1.5 points)

| Values | $\mathrm{i}=1$ | $\mathrm{i}=2$ | $\mathrm{i}=3$ | $\mathrm{i}=4$ | $\mathrm{i}=5$ | $\mathrm{i}=6$ | $\mathrm{i}=7$ | $\mathrm{i}=8$ | Final Value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{a}=1$ | 6 | 12 | 17 | 34 | 39 | 78 | 83 | 166 | 166 |
| $\mathrm{a}=2$ | 7 | 14 | 19 | 38 | 43 | 86 | 91 | 182 | 182 |
| $\mathrm{a}=3$ | 8 | 16 | 21 | 42 | 47 | 94 | 99 | 198 | 198 |

## Part C: Understanding Concurrency in Scratch (1.5 points)

C Yes.
D No. The exact number of meow recordings played depends on which block among the second and third blocks finishes first. If the second block finishes first, then the recording is played zero times. Otherwise, 5 sounds are played.

E Yes.
F No. Again the exact number of meow recordings played depends on block finishes first. If the first block finishes first then 5 sounds are played. Otherwise the recording is played an arbitrary number of times.

G No. The recording is played either once or never depending on which block (among the second and the third blocks) finishes first.

