Name: Andres Quintana

Section/Time: MW 12:30-2:50

Date: 10/16/2020

**Translate the following tasks into Hack C-Instructions:**

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| --- | --- |
| 1) Set **D** to **A - 1** | D = A – 1 |
| 2) Set both **A** and **D** to **A + 1** | AD = A + 1 |
| 3) Set **D** to **19** | @19  D = A |
| 4) Set both **A** and **D** to **A + D** | AD = D + A |
| 5) Set **RAM[5034]** to **D - 1** | @5034  M = D – 1 |
| 6) Set **RAM[543]** to **171** | @171  D = A  @543  M = D |
| 7) Add **1** to **RAM[7]**, and store result in **D** | @7  D = M + 1 |
| 8) Add **3** to **RAM[12]**, and store result in **D** | @3  D = A  @12  D = D + M |

**Translate the following tasks into Hack C-Instructions. Assume arr in questions 4 through 6 has been appropriately initialized.**

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| --- | --- |
| 1) **sum = 0** | @sum  M = 0 |
| 2) **j = j + 1** | @j  M = M + 1 |
| 3) **q = sum + 12 - j** | @sum  D = M  @12  D = D + A  @j  D = D - M  @q  M = D |
| 4) **arr[3] = -1** | @arr  D = M  @3  A = D + A  M = -1 |
| 5) **arr[j] = 0** | @j  D = M  @arr  A = D + M  M = 0 |
| 6) **arr[j] = 17** | @j  D = M  @arr  D = D + M  @temp  M = D  @17  D = A  @temp  A = M  M = D |