CS 1632 – DELIVERABLE 4: Performance Testing Using VisualVM

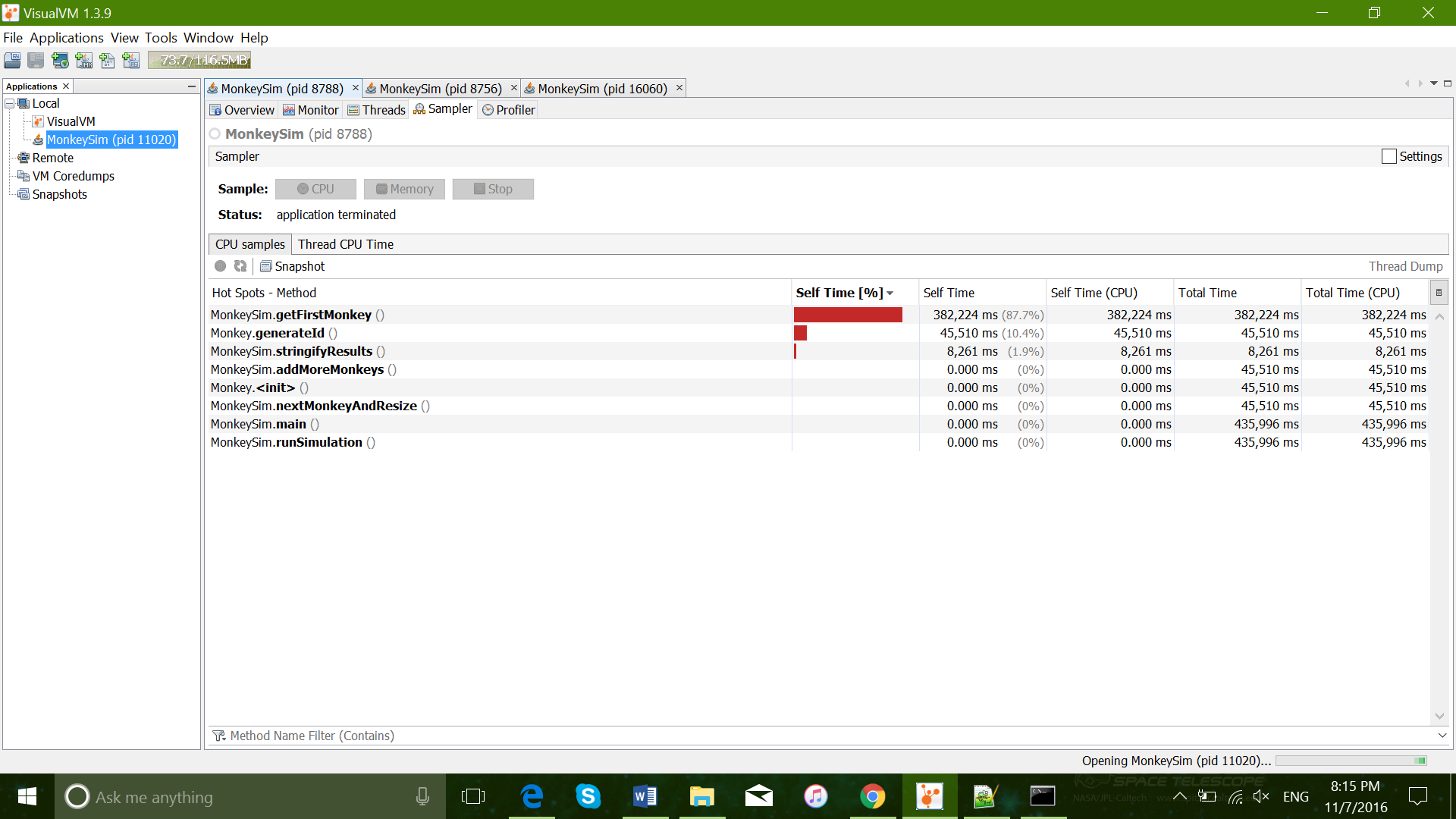
Nick Taglianetti, Michael Oles

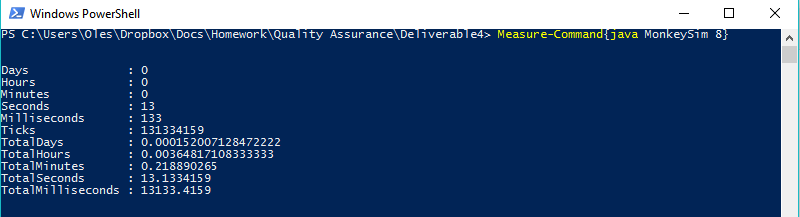
Summary

To determine where this program was running slowly, we sampled the CPU and Memory in VirtualVM. We found that the method getFirstMonkey() was taking up a large percentage of the CPU. We then looked at that method to see if there was a way we could keep the same functionality while being more efficient. After we made the improvements we found that the runtime improved but generateId() was now taking up the most time. We went through the same method to improve this function and decreased the runtime again. The last function we changed was stringifyResults() after this the runtime decreased noticeably. We also deleted the MonkeySim field called HEADER for clarity because it was only used in stringifyResults() in the original code and was now not needed at all. We could have continued on with methods like monkeyWithBanana() which are still taking up a significant portion of the CPU but for this project we only changed 3 methods.

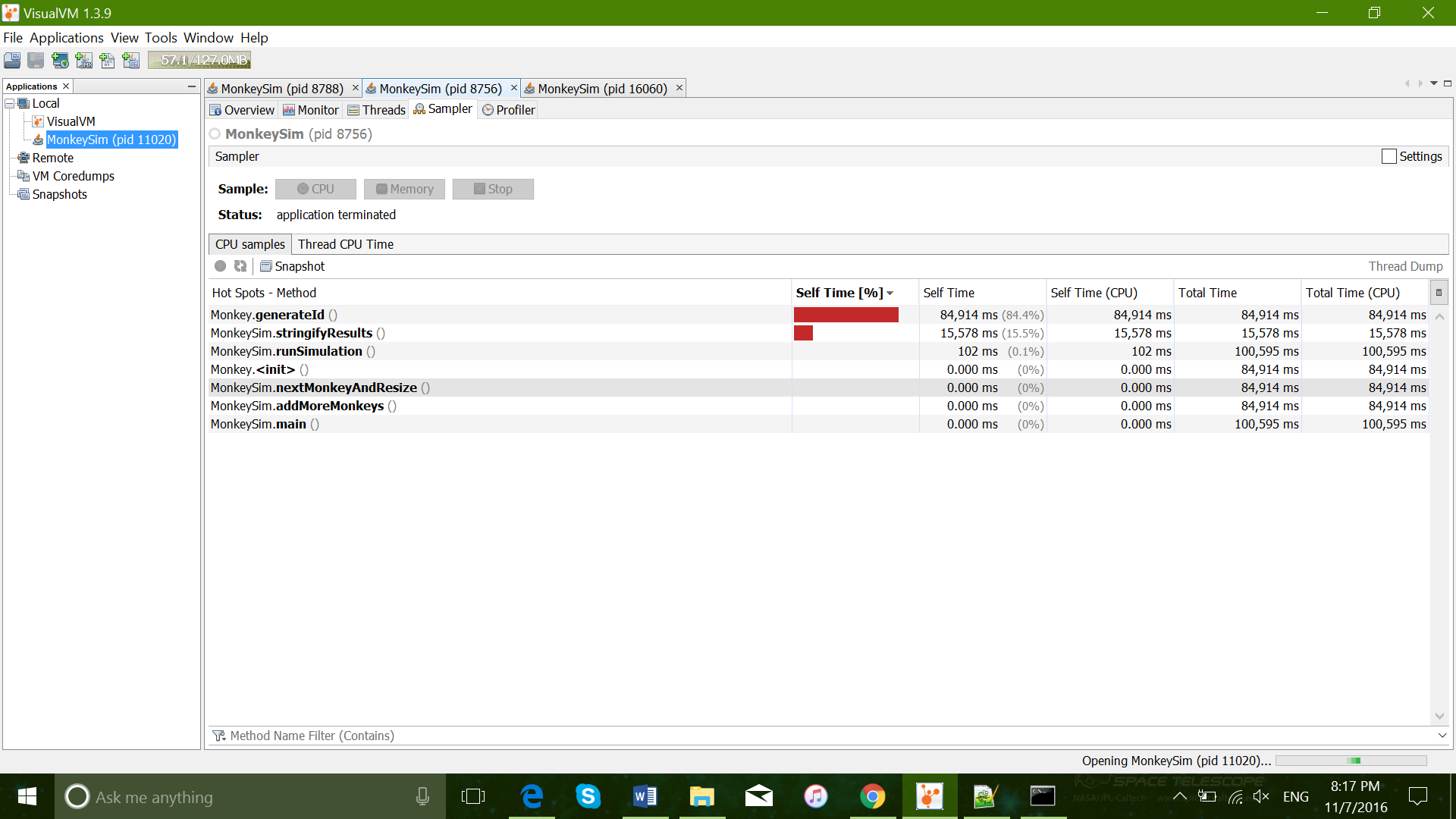
Screenshots of VisualVM and Runtime

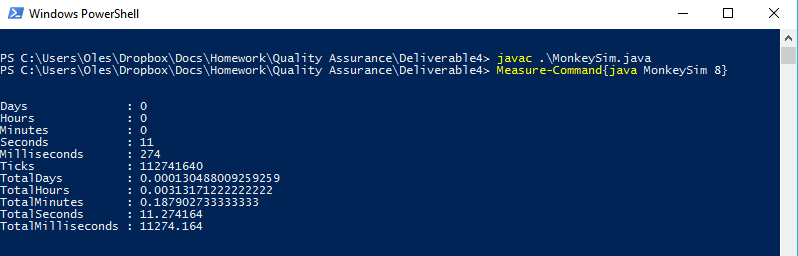
Before modifying MonkeySim.getFirstMonkey():



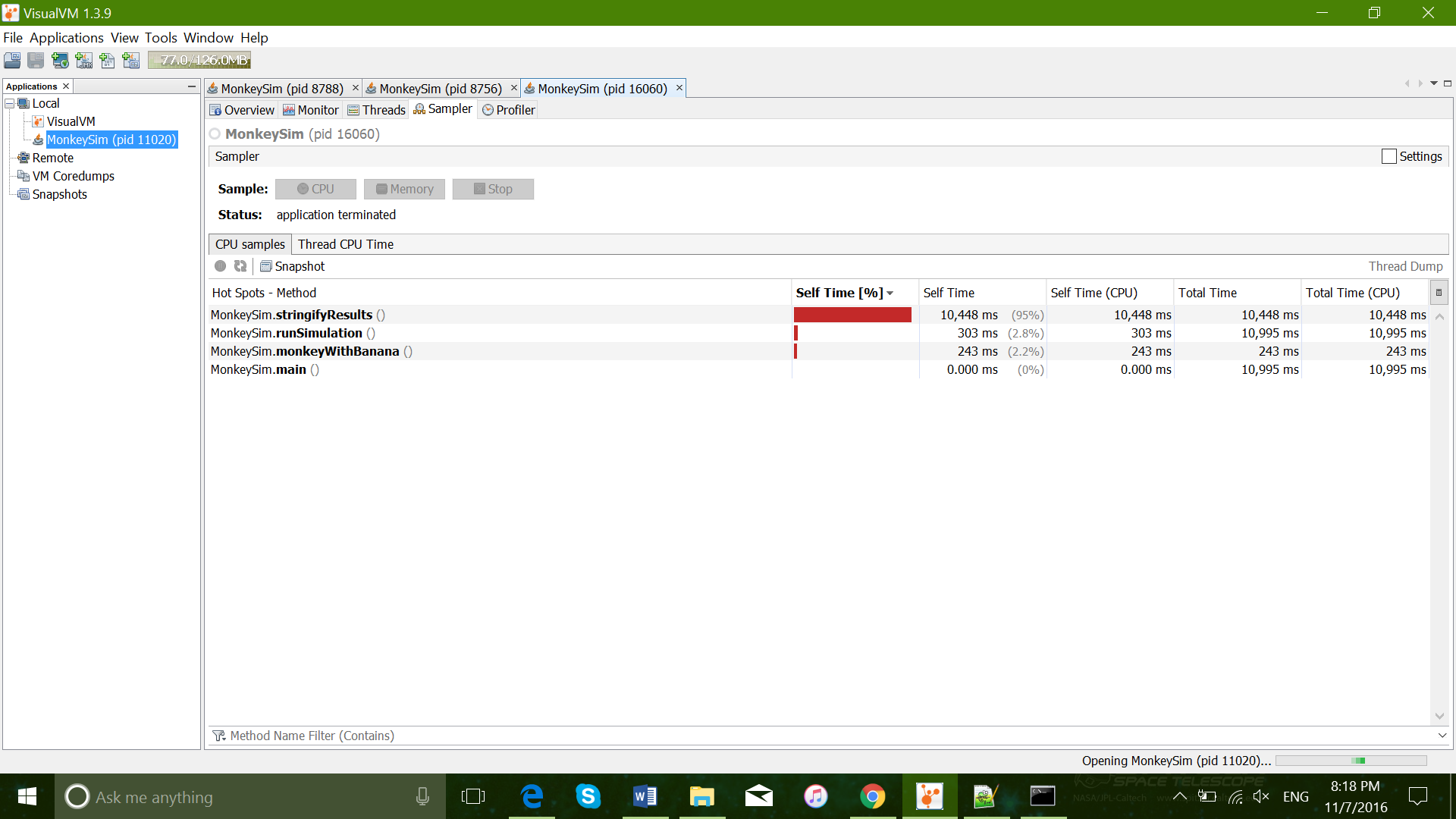


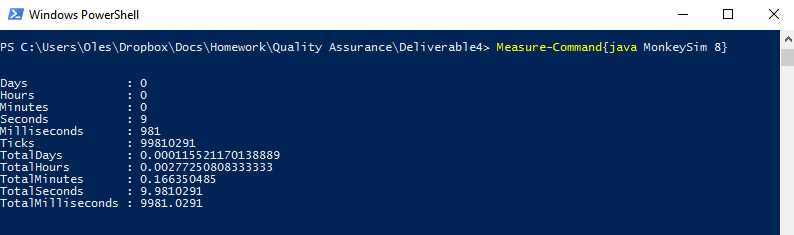
After modifying MonkeySim.getFirstMonkey(), before modifying Monkey.generateId():





After modifying Monkey.generateId(), before modifying MonkeySim.stringifyResults():





After modifying stringifyResults()

