

Assignment 1: Profiling machine

1 Introduction

Companies like AMD and Intel do system-wide profiling to identify bottlenecks in hardware. Generally speaking, such analysis influence the next-generation hardware design decisions. In this assignment, you will profile your personal computer. We recommend to use Windows OS.

2 Assignment

Your task is to profile your personal computer in two different configurations:

- **Idle machine:** In this experiment, you will collect trace data in idle mode i.e. you will not be running any external process such as web browser, word, and PDF when you are collecting trace. Collect the trace in this configuration for at least 5 minutes.
- **Busy machine:** In other experiment, you will launch few processes (at least 3-5) such as streaming video on Youtube, PDF, and Word to keep the system busy. While these processes are running, you will collect another trace. Collect the trace in this configuration for at least 5 minutes.

Analyze these traces and write a report (of about 3-4 pages) summarizing your findings. You can use tables and graphs to support your findings.

Your report should have at least following information:

- Machine details (processor, OS, memory, number of CPU cores, etc.)
- Which processes are you running for making the machine busy?
- Trace duration
- Analysis, Findings, and Summary