HIGH PERFORMANCE COMPUTING

LAB ASSIGNMENT – 01

BATCH – 04

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JUST FOR THE REFERENCE PURPOSE IM KEEPING THE CODE BELOW

```python
#Save as io_to_scratch.py:
# io_to_scratch.py
import os, time, platform

def compute(n=300_000):
  s = 0.0
  for i in range(n):
    s += (i % 13) * 0.314159
    return s

if __name__ == "__main__":
  scratch = os.getenv("SLURM_TMPDIR", os.getenv("TMPDIR", "/tmp"))
  result = compute()
  ts = time.strftime("%Y%m%d_%H%M%S")
  out_path = os.path.join(scratch, f"result_{ts}.txt")
  with open(out_path, "w") as f:
    f.write(f"Host={platform.node()}\nResult={result:.6f}\n")
    print("Wrote:", out_path)
```

```
import os, time, platform


def compute(n=300_000):
    s = 0.0
    for i in range(n):
        s += (i % 13) * 0.314159
    return s


if __name__ == "__main__":
    # Portable scratch directory (Windows / Linux / Colab safe)
    scratch = os.getcwd()
```

```
result = compute()

ts = time.strftime("%Y%m%d_%H%M%S")
out_path = os.path.join(scratch, f"result_{ts}.txt")

with open(out_path, "w") as f:
    f.write(f"Host={platform.node()}\n")
    f.write(f"Result={result:.6f}\n")

print("Wrote:", out_path)
```

CPU

```
# CPU
Wrote: /tmp/result_20260128_042249.txt
```

GPU

```
# GPU
Wrote: /tmp/result_20260128_042630.txt
```

TPU

```
# TPU

Wrote: /tmp/result_20260128_042709.txt
```

LOCAL SERVER (VS CODE)

```
PS D:\3-2 SEM\HPC-1221> python -u "d:\3-2 SEM\HPC-1221\HPC.PY"
Wrote: D:\3-2 SEM\HPC-1221\result_20260128_100350.txt
PS D:\3-2 SEM\HPC-1221>
```