

Lab 6: Meltdown Attack

Module 1 – Covert Channel:

```
aryanmehrotra@Aryans-MacBook-Pro submission % ./CovertChannel  
Hits: 91096  
Num traces: 100000  
The correctness ratio is 0.910960
```

Covert channel has a 91.096% reliability based on the correctness ratio.

Module 2 – Exception Suppression:

```
aryanmehrotra@Aryans-MacBook-Pro submission % ./ExceptionSuppression  
exception suppressed: 59028  
aryanmehrotra@Aryans-MacBook-Pro submission %
```

The Covert Channel test and Exception Suppression test were run on my local computer while the Meltdown attack was done on the lab server.

My CPU model is an Intel(R) Core(TM) i9-9880H @ 2.3 GHz.

Module 3 – Meltdown:

The secret message recovered from the attack is: Have a great winter break! You deserve it after you see this message.

A screenshot of the output in recovered in terminal from the lab server is on the next page.

```
mehrotra@ecehss:~/lab6$ vi attacker.c
[mehrotra.a@ecehss:~/lab6$ gcc attacker.c -o attacker
[mehrotra.a@ecehss:~/lab6$ taskset -c 0 ./attacker
Attack Results: H
Attack Results: a
Attack Results: v
Attack Results: e
Attack Results:
Attack Results: a
Attack Results:
Attack Results: g
Attack Results: r
Attack Results: e
Attack Results: a
Attack Results: t
Attack Results:
Attack Results: w
Attack Results: i
Attack Results: n
Attack Results: t
Attack Results: e
Attack Results: r
Attack Results:
Attack Results: b
Attack Results: r
Attack Results: e
Attack Results: a
Attack Results: k
Attack Results: !
Attack Results:
Attack Results: Y
Attack Results: o
Attack Results: u
Attack Results:
Attack Results: d
Attack Results: e
Attack Results: s
Attack Results: e
Attack Results: r
Attack Results: v
Attack Results: e
Attack Results:
Attack Results: i
Attack Results: t
Attack Results:
Attack Results: a
Attack Results: f
Attack Results: t
Attack Results: e
Attack Results: r
Attack Results:
Attack Results: y
Attack Results: o
Attack Results: u
Attack Results:
Attack Results: s
Attack Results: e
Attack Results: e
Attack Results:
Attack Results: t
Attack Results: h
Attack Results: i
Attack Results: s
Attack Results:
Attack Results: m
Attack Results: e
Attack Results: s
Attack Results: s
Attack Results: a
Attack Results: g
Attack Results: e
Attack Results: .
```