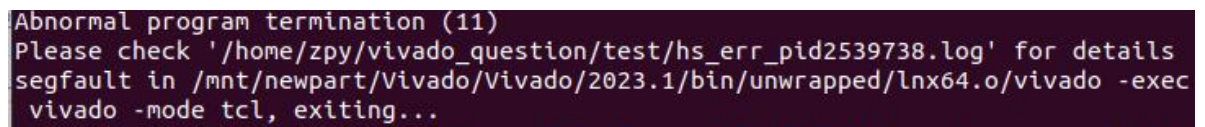


In Vivado's synthesis stage, occurred a problematic function `BDD::operator~()` causing Vivado crash, leading to synthesis process interruption

I'm experiencing a crashing issue with Vivado while synthesizing design files. My system runs on Linux, and I'm using Vivado version 2023.1. The relevant commands I'm using in the Ubuntu terminal are as follows:

```
vivado -mode tcl
read_verilog rtl.v
synth_design -top top -gated_clock_conversion on -directive PerformanceOptimized -fsm_extraction
gray -resource_sharing auto
```

During the synthesis process, there's a crash, and a log is generated with information about the cause of the crash.

A screenshot of a terminal window with a dark background and light-colored text. The text displays an error message from Vivado, indicating an abnormal program termination and providing a path to a log file for more details. The error message is as follows:

```
Abnormal program termination (11)
Please check '/home/zpy/vivado_question/test/hs_err_pid2539738.log' for details
segfault in /mnt/newpart/Vivado/Vivado/2023.1/bin/unwrapped/linux64.o/vivado -exec
vivado -mode tcl, exiting...
```

I've attached our design file `rtl.v` and the log output from Vivado.