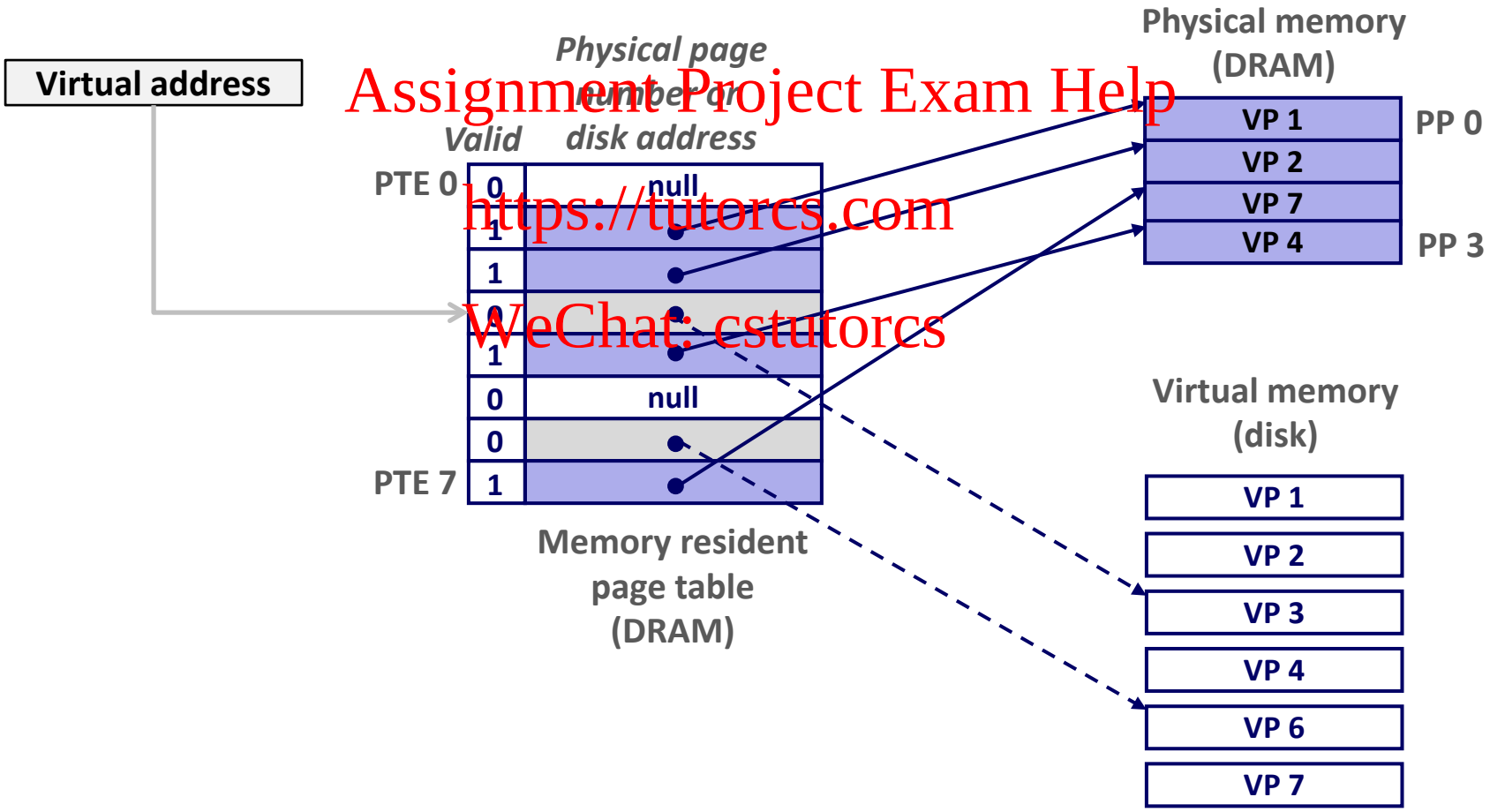
Handling Page Fault

- Page miss causes page fault (an exception)



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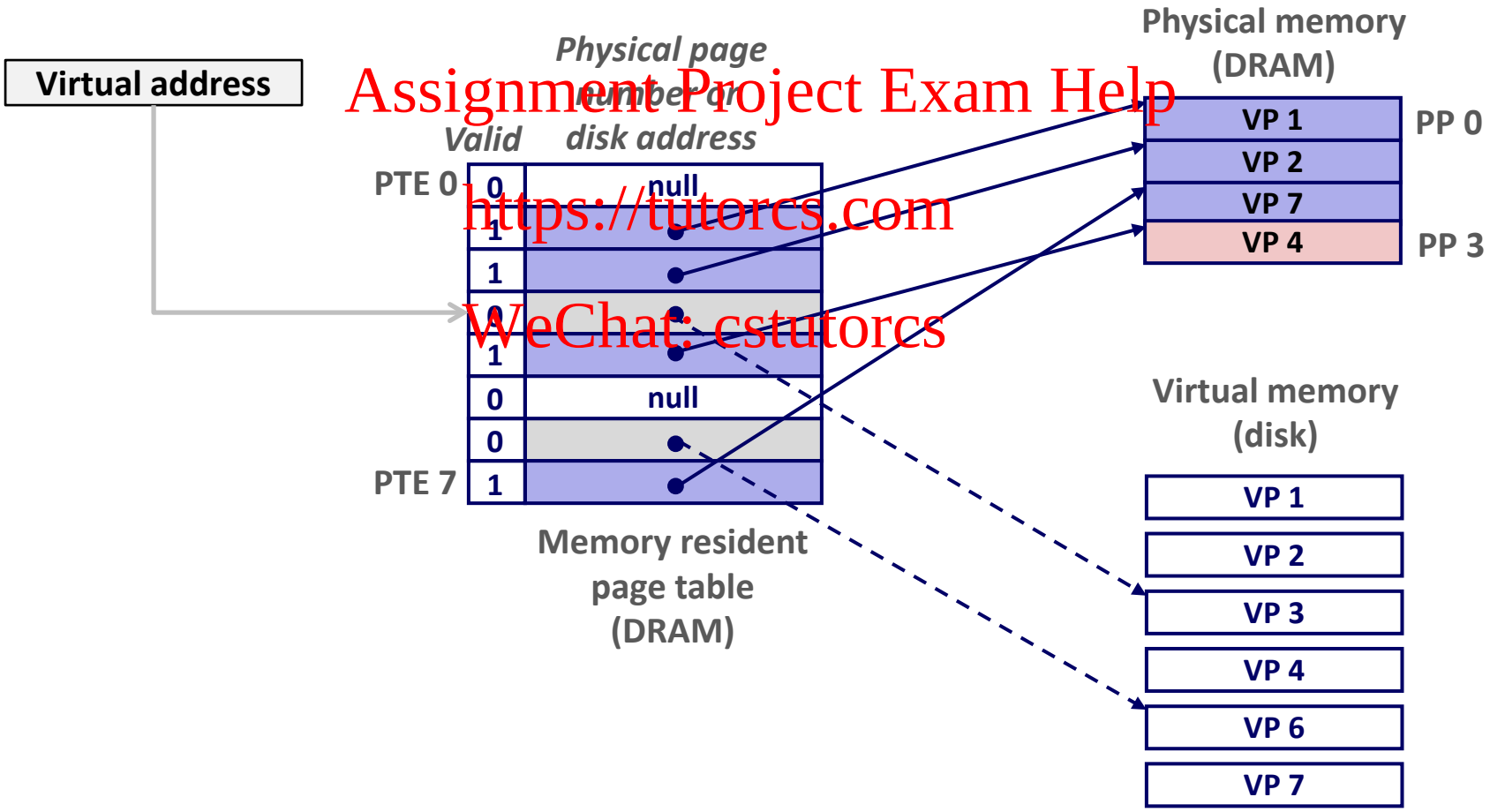

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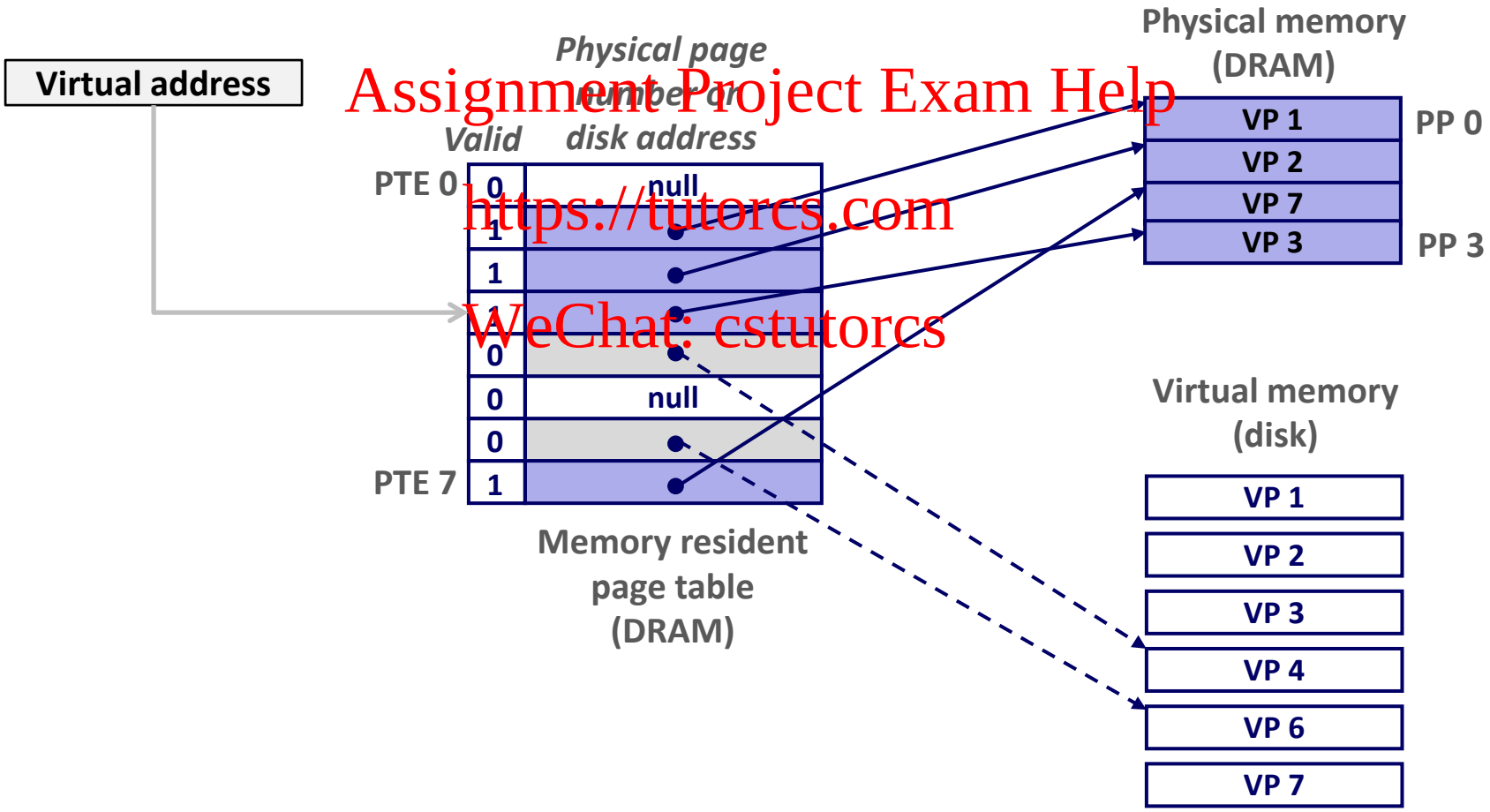

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Handling Page Fault

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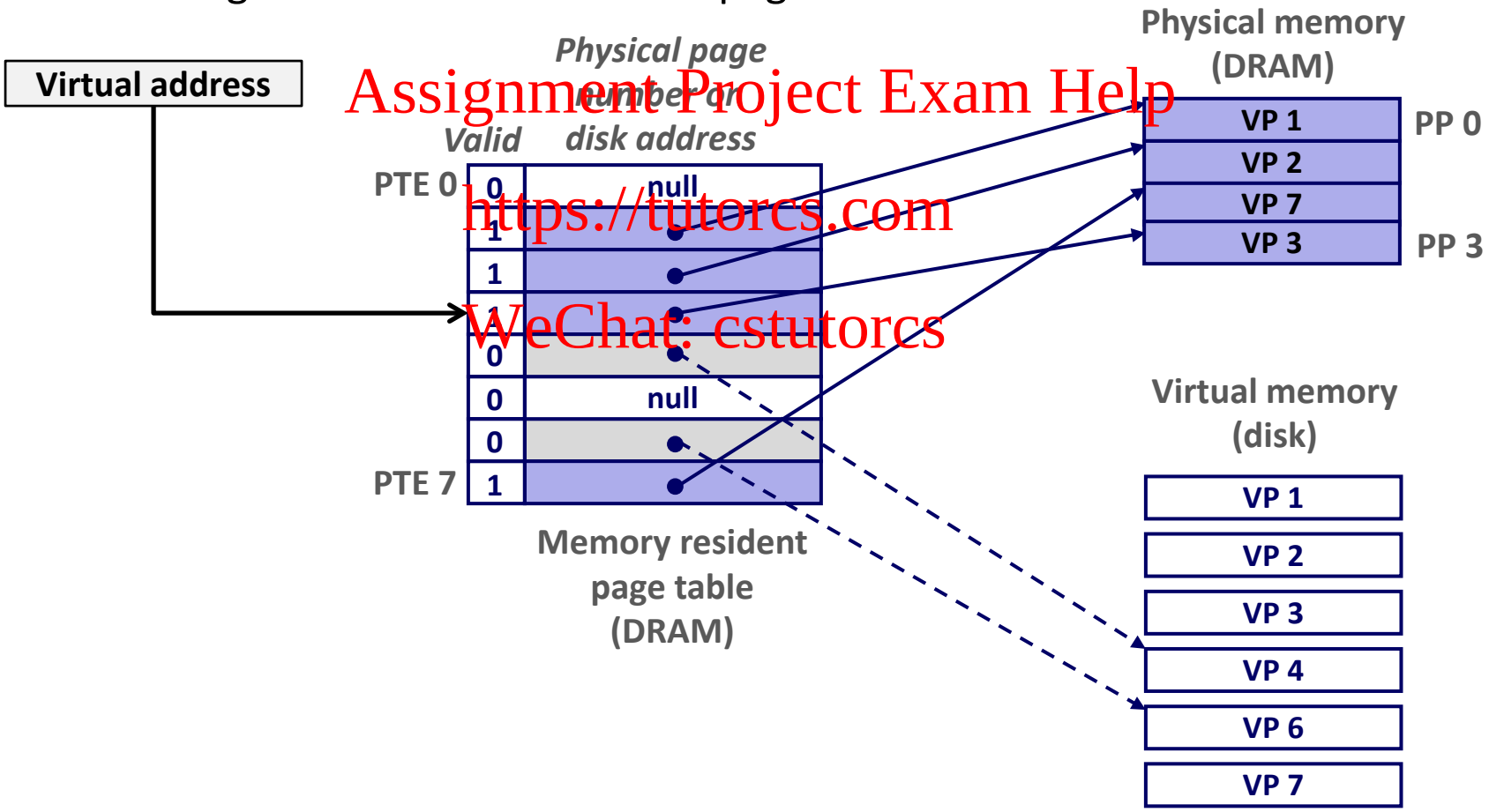
- Offending instruction is restarted: page hit!



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Locality to the Rescue Again!

- **Virtual memory works because of locality**
- **At any point in time, programs tend to access a set of active virtual pages called the *working set***
  - Programs with better temporal locality will have smaller working sets
- **If (working set size < main memory size)**
  - Good performance for one process after compulsory misses
- **If (SUM(working set sizes) > main memory size)**
  - *Thrashing:* Performance meltdown where pages are swapped (copied) in and out continuously

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