FrameDesc :: GlobalConst

--------------------------

pageNo : PageId

dirty : boolean

pin\_cnt : int

--------------------------

FrameDesc()

pin\_count()

pin()

unpin()

--------------------------

BufHTEntry

--------------------------

next : BufHTEntry

pageNo : PageId

frameNo : int

--------------------------

--------------------------

BufHashTbl :: GlobalConst

--------------------------

HTSIZE : int

BufHTEntry[] : BufHTEntry

--------------------------

BufHashTbl()

hash()

insert(

PageId pageNo,

int frameNo)

lookup(PageId pageNo)

remove(PageId pageNo)

display()

--------------------------

Clock :: Replacer

--------------------------

--------------------------

Clock(BufMgr javamgr)

pick\_victim()

name()

info()

--------------------------

Replacer :: GlobalConst

--------------------------

head : int

state\_bit[] : STATE

Available : int

Referenced : int

Pinned : int

--------------------------

Replacer(BufMgr javamgr)

pin(int frameNo)

unpin(int frameNo)

free(int frameNo)

pick\_victim()

name();

info();

getNumUnpinnedBuffers()

setBufferManager(BufMgr mgrArg)

--------------------------

STATE

--------------------------

state : int

--------------------------

--------------------------

victim\_data

--------------------------

frame\_num : int

page\_id : int

--------------------------

--------------------------BufMgr :: GlobalConst

--------------------------

hashTable : BufHashTbl

numBuffers : int

bufPool : byte[][]

frameTable : FrameDesc

replacer : Replacer

--------------------------

BugMgr(

int numbufs,

String replacerArg)

bmhashdisplay()

pinPage(

PageId pin\_pgid,

Page page,

boolean emptyPage)

unpinPage(

PageI PageId\_in\_a\_DB,

boolean dirty)

newPage(

Page firstpage,

int howmany)

freePage(PageId globalPageId)

privFlushPages(

PageId pageid,

int all\_pages)

flushPage(PageId pageid)

flushAllPages()

getNumBuffers()

getNumUnpinnedBuffers()

frameTable()

write\_page(

PageId pageno,

Page page)

read\_page(

PageId pageno,

Page page)

allocate\_page(

PageId pageno,

int num)

deallocate\_page(PageId pageno)

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