```c
/*
 * the pgd page can be thought of an array like this: pgd_t[PTRS_PER_PGD]
 *
 * this macro returns the index of the entry in the pgd page which would
 * control the given virtual address
 */
#define pgd_index(address) (((address) >> PGDIR_SHIFT) & (PTRS_PER_PGD-1))
```