```
/*
 * Provisional PGDir and page tables setup
 *
 * for mapping two linear address ranges to the same physical address range
 *
 *  + Linear address ranges:
 *             -   User mode: i*4M ~ (i+1)*4M-1
 *             - Kernel mode: 3G+i*4M ~ 3G+(i+1)*4M-1
 *  + Physical address range: i*4M ~ (i+1)*4M-1
 */
typedef unsigned int PTE;
PTE *pg = pg0;     /* physical address of pg0 */
PTE pte = 0x007;   /* 0x007 = PRESENT+RW+USER */
for(i=0;;i++){
  swapper_pg_dir[i] = pg + 0x007;         /* store identity PDE entry */
  swapper_pg_dir[i+page_pde_offset] = pg + 0x007; /* kernel PDE entry */
  for(j=0;j<1024;j++){               /* populating one page table */
    pg[i*1024 + j] = pte;            /* fill up one page table entry */
    pte += 0x1000;                   /* next 4k */
  }
  if(pte >= ((char*)pg + i*1024 + j)*4 + 0x007 + INIT_MAP_BEYOND_END)
    {
      init_pg_tables_end = pg + i*0x1000 + j;
      break;
    }
 }
```