Problem B2 [35]

(i) [10] Convert the following C function to MIPS assembly code (using only real MIPS instructions).

```c
void swap (int *a, int *b) {
    int temp;
    temp = *a;
    *a = *b;
    *b = temp;
}
```

(ii) [25] Assume that `mylist` is the following structure in C

```c
struct mylist {
    int a;
    struct mylist *next;
};
```

Part a: [20] Translate the following C function into equivalent MIPS one. Assume the input argument of the function is in $a0 and the output is in $v0. You may preserve only those registers across function calls which would be required for correct implementation. Also, assume that NULL pointer is 0.

```c
struct mylist *getend (struct mylist *p) {
    if (p -> next == NULL) return p;
    else return getend(p -> next);
}
```