

```
1 class Sys {
2   /** Performs all the initializations required by the OS. */
3   function void init() {
4     do Memory.init();
5     do Math.init();
6     do Output.init();
7     do Screen.init();
8     do Keyboard.init();
9
10    do Main.main();
11
12    do Sys.halt();
13
14    return;
15  }
16
17  /** Halts execution. */
18  function void halt() {
19    while (true) {}
20
21    return;
22  }
23
24  /** Waits approximately duration milliseconds and then returns. */
25  function void wait(int duration) {
26    var int i, j;
27
28    if (duration < 0) {
29      do Sys.error(1); // Sys.wait: Duration must be positive
30    }
31
32    let i = 0;
33
34    while (i < duration) {
35      let j = 0;
36
37      while (j < 10) {
38        do Memory.peek(0);
39        do Memory.peek(0);
40        do Memory.peek(0);
41
42        let j = j + 1;
43      }
44
45      let i = i + 1;
46    }
47
48    return;
49  }
```

```
50  
51 /** Prints the given error code in the form "ERR<errorCode>", and halts. */  
52 function void error(int errorCode) {  
53     do Output.printString("ERR");  
54     do Output.printInt(errorCode);  
55  
56     do Sys.halt();  
57  
58     return;  
59 }  
60 }  
61
```