Program A:

```
boolean test_and_set (boolean *target)
        {
            boolean returnValue = *target;
            *target = TRUE;
            return returnValue:
        }

 do {
        while (test_and_set(&lock))  { }       // do nothing
              /* critical section */
        lock = false;
              /* remainder section */
      } while (true);
```

**Program B:**

```
boolean test_and_set (boolean *target)
        {
            boolean returnValue = *target;
            *target = TRUE;
            return returnValue:
        }

do {
        while (test_and_set(&lock))  { }     // do nothing
              /* critical section */
        lock = false;
              /* remainder section */
      } while (true);
```

**Sample Execution:**

Copy and paste lines of code to simulate the execution of commands that will demonstrate how two processes use test and set for a shared variable ‘lock’.

lock = false;

```
do {
          while (test_and_set(&lock))
```