Name and Surname(s):

- This test **must** be recorded with **OBS**.
- The **only** internet access that you can have is the **MUdle** page of this course.
- Any content in the **MUdle** page of this course **can** be used.
- You can **not** use any exercise stored in your computer.
- Any of the **constructors** of the `Semaphore` class **can** be used.
- Only the `void release()` and `void acquire()` **methods** of the `Semaphore` class **can** be used (`void release(int permits)` and `void acquire(int permits)` are **not** permitted).

1. **ABC** (3 points). There are three threads: one that prints "A", another one that prints "B", and a final one that prints "C". Modify the code in abc.zip in order to print their messages in the following order:

```
...
A
B
C
A
B
C
...
```

2. **Bridge** (4 points). There is a One-lane bridge on which cars can travel either east to west or west to east. If there are one or more cars crossing the bridge in one direction, any car attempting to cross in the other direction must wait until they finish.

   - (2 points) Modify the code in bridge.zip so that there are no cars crossing the river at the same time in opposite direction.
   - (2 points) Modify your code to avoid starvation (If there are cars crossing the river in one direction and another car starts waiting in the other, the cars that are crossing the river can finish, but new ones must wait for this one).

3. **Senate Bus** (3 points). There is a shuttle bus that takes the riders that are waiting in the bus stop of the senate. Once the bus arrives, all the waiting riders board and the bus leaves the stop. If a new rider arrives while boarding he/she must wait for the next bus. Modify the code in senate_bus.zip to represent this boarding process.