

Sample 1:

A farmer needs to transport a wolf, a rabbit, and a bundle of cabbage across a river. However, he cannot carry all of the items in his boat at one time. Thus, he will have to make multiple trips across the river. With each trip, he might have to leave part of his cargo on the shore unattended.

If left unattended together, the wolf will eat the rabbit, and the rabbit will eat the cabbage.

In a JAVA program, there are three boolean variables – **wolf**, **rabbit**, and **cabbage**. The value of each variable is **true** if that item is unattended on the shore, and **false** otherwise.

Write an **if** statement that will set the boolean variable **safe** to **true** if unattended items will be safe, and to **false** if one of the items will get eaten.

```
if ((wolf && rabbit) || (rabbit && cabbage))
    safe = false;
else
    safe = true;
```

Sample 2:

A certain chef insists that chicken needs a flavouring to make it edible. This chef has three flavourings: chili, lemon, and black pepper.

The chicken needs at least one flavouring, but chili and lemon can't be used at the same time, and chili and pepper can't be used at the same time either.

In a JAVA program, there are three boolean variables – **chili**, **lemon**, and **pepper**. The value of each variable is **true** if that flavouring has been added to the chicken, and **false** otherwise.

Write an **if** statement that will set the boolean variable **edible** to **true** if the added flavourings will lead to edible chicken, and to **false** if the flavourings will not lead to edible chicken.

```
if (((lemon || pepper) && !chili) ||
    (chili && !lemon && !pepper))
    edible = true;
else
    edible = false;
```