

Exercise 1

Modeling algorithms of methods Character strings in the C language are encoded as an array of non-null characters, terminated by a special character.

For example, the string `s = "hello!"` is encoded as follows:

<code>s[0]</code>	<code>s[1]</code>	<code>s[2]</code>	<code>s[3]</code>	<code>s[4]</code>	<code>s[5]</code>	<code>s[6]</code>
<code>'h'</code>	<code>'e'</code>	<code>'l'</code>	<code>'l'</code>	<code>'o'</code>	<code>'!'</code>	<code>'\0'</code>

Question:

Describe an activity implementing the function `strlen`, which takes as input an array of characters and returns an integer corresponding to the length of the string.

A possible implementation could be:

```
Int strlen (char S[ ])
{
    int i;
    i = 0;
    while s[i] != '\0'
        i++;
    return i;
}
```

Exercise 2

Build the activity diagram for purchasing a football match ticket.

Exercise 3

Build the activity diagram representing the use of an ATM (Automated Teller Machine).