General functioning of the prototype and graphical interface

To use the Cognomia prototype, a set of metadata already categorized by the subject was inserted into the database so that the information system could execute the classification processes established by the proposed method. The sequence of user interaction with the prototype is described below:

- **Cognomy:** The user must register the information in the fields <u>Title, Detail the subject and Type Tag</u> as in Figure 2; after that, the system suggests the tags (according to the term chosen for the search tag entered by the user). The user types the Search Tag and clicks the <u>Consult</u> button to be redirected to the next page (Figure 3).
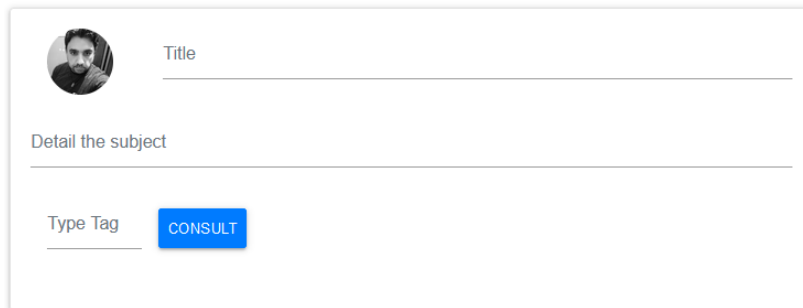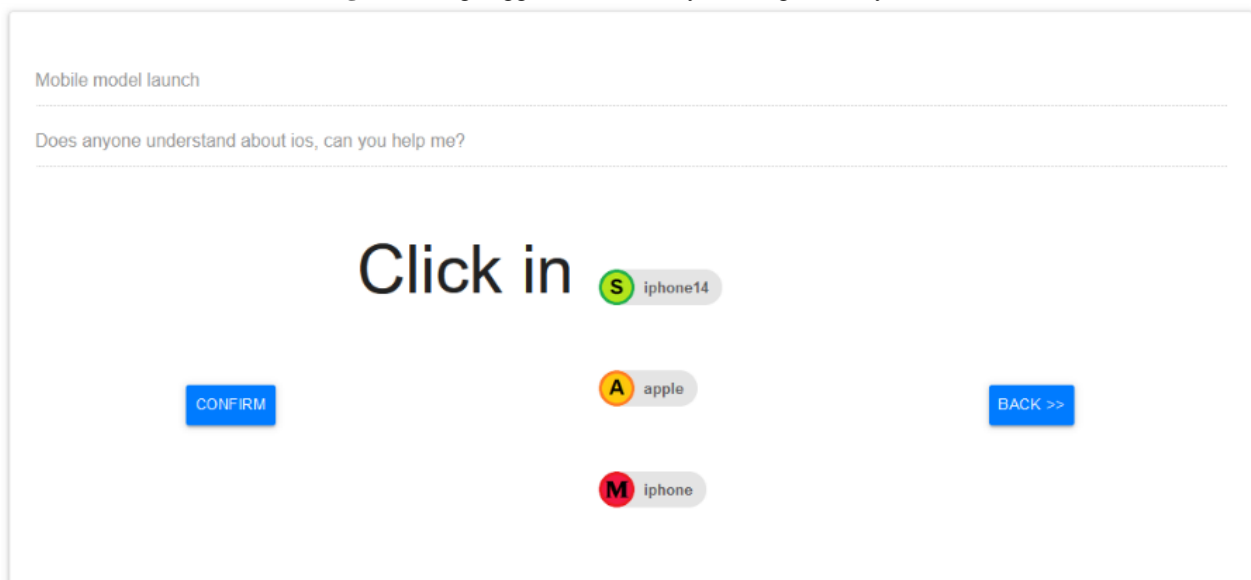

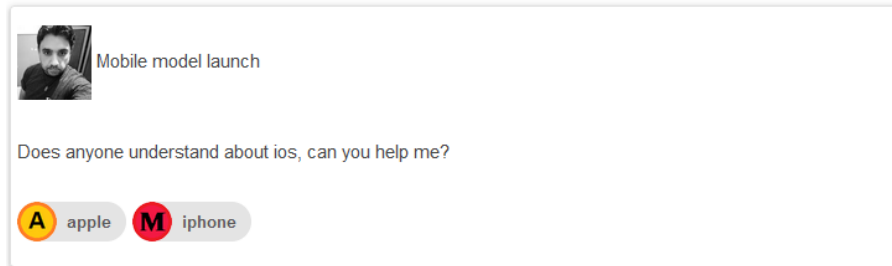**Figure 2.** Microblog screen for posting in the Cognomia prototype.

- **Tag suggestion:** For simulation, a thousand metadata already categorized for this sample used in the experiment were added, data related to the same context with Apple products. This simulation is performed using the narrow folksonomy concept that limits the context in which the metadata is being used, considering only a group that generates metadata of the same subject [16, 51].
- The term 'iphone' was chosen to be typed as a reference in the generated some bulleted tag suggestions. Suggested tags are: '⑤ iphone14', '④ apple' and '⑩ iphone', according to Figure 3:

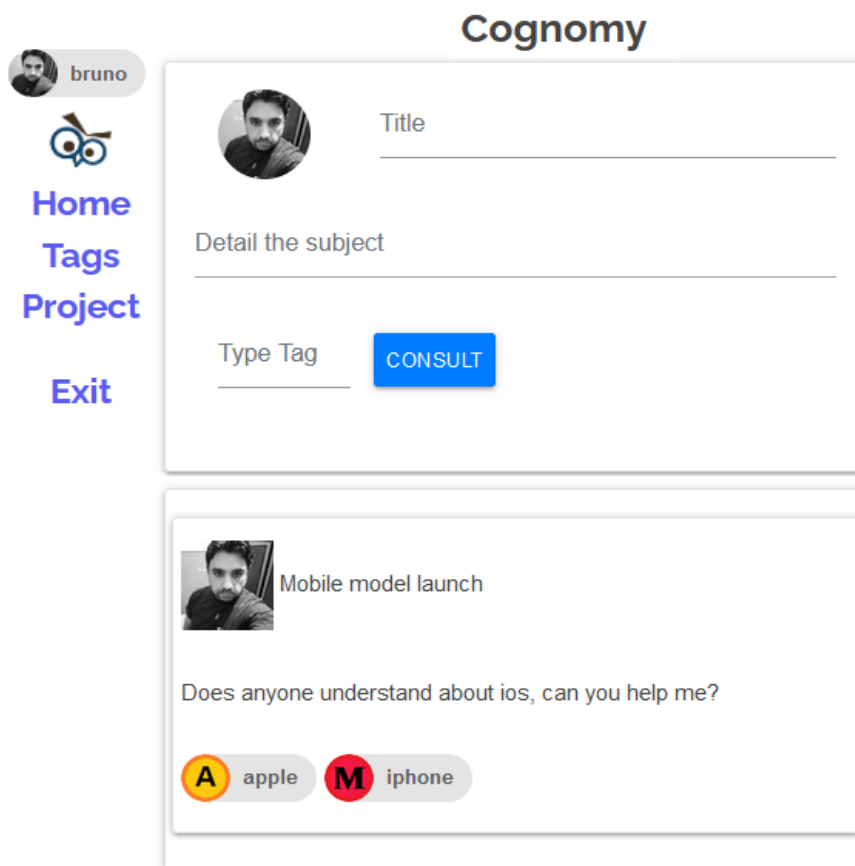**Figure 3.** Tag suggestion screen by the Cognomia system.

● **Postage**: After choosing the tags that will be indexed (Figure 4), the post is published on the Cognomy page, and each post is identified as having been generated by the user logged into the prototype. It should be noted that the post is public, as shown in Figure 5.

Figure 4. Example of a post right after choosing the tags.

Upon completing the process of indexing the tags chosen to compose his post, the user has his message published on the Cognomy screen, where all publications generated by network users are found. The microblogging system with some posts can be seen in the illustration in Figure 5.

Figure 5. Microblog screen with user posts.

This tool was developed to test and verify the use of indexes embedded in posts in a microblog similar to Twitter. An experiment was carried out with a group of users to study the use of the tag recommendation system and verify its applicability; the results obtained can be found in the following sections of this article.