

Exercise A

1. Consider a file system with a graphical user interface, such as Macintosh's Finder, Microsoft's Windows Explorer, or Linux's KDE. The following objects were identified from a use case describing how to copy a file from a floppy disk to a hard disk: File, Icon, TrashCan, Folder, Disk, Pointer. Specify which are entity objects, which are boundary objects, and which are control objects.
2. Assuming the same file system as before, consider a scenario consisting of selecting a File on a floppy, dragging it to Folder and releasing the mouse. Identify and define at least one control object associated with this scenario.
3. Arrange the objects listed in Exercises 5-1 and 5-2 horizontally on a sequence diagram, the boundary objects to the left, then the control object you identified, and finally, the entity objects. Draw the sequence of interactions resulting from dropping the file into a folder. For now, ignore the exceptional cases.

Exercise B

For the following scenario, identify the entity, boundary object and control object.

Name **PSLTournament**

Flow of events

1. The **LeagueOwner** requests the creation of a **tournament**.
2. The system checks if the LeagueOwner has exceeded the **number of tournaments** in the **league** or in the **arena**. If not, the system presents the LeagueOwner with a form.
3. The LeagueOwner specifies a **name**, **application start and end dates** during which Players can apply to the tournament, **start and end dates** for conducting the tournament, and a **maximum number of Players**.
4. The system asks the LeagueOwner whether an exclusive sponsorship should be sought and, if yes, presents a **list of Advertisers** who expressed the desire to be **exclusive sponsors**.
5. If the LeagueOwner decides to seek an exclusive sponsor, he selects a subset of the **names** of the **proposed sponsors**.
6. The system notifies the selected sponsors about the upcoming tournament and the **flat fee** for exclusive sponsorships.
7. The system communicates their **answers** to the LeagueOwner.
8. If there are interested sponsors, the LeagueOwner selects one of them.
9. The system records the **name** of the exclusive sponsor and charges the flat fee for sponsorships to the **Advertiser's account**. From now on, all **advertisement banners** associated with the tournament are provided by the exclusive sponsor only.
10. If no sponsors were selected (either because no Advertisers were interested or the LeagueOwner did not select any), the advertisement banners are selected at random and charged to each Advertiser's account on a per unit basis.
11. Once the sponsorship issues is closed, the system prompts the LeagueOwner with a **list of groups of Players, Spectators, and Advertisers** that could be interested in the new tournament.
12. The LeagueOwner selects which groups to notify.
13. The system creates a home page in the arena for the tournament. This page is used as an entry point to the tournament (e.g., to provide interested Players with a form to apply for the tournament, and to interest Spectators into watching **matches**).
14. At the application start date, the system notifies each interested user by sending them a link to the main tournament page. The Players can then apply for the tournament with the ApplyForTournament use case until the application end date.