

Part 1

Django plays a big role in abstracting away the need to deal with database management. However, this means as developers we have to make good choices about what structures and data our models contain and how they are related to enable the ORM to work most efficiently.

In our research software we have task objects that a user have to complete, each task has a title, an order field, a description and a type (such as survey, discussion, diary). We group tasks together in a container which we call a tile. Each tile has a launch date and a status. The status can be either live, pending or archived. A tile can be made up of one or many tasks. A task can only belong to a single tile.

Therefore, this exercise is to create a Django 4.x project that contains task and tile models, configured as outlined above. We would also like you to create a simple API to allow interaction with these models with DRF (Django Rest Framework), using the appropriate viewsets and serialisers provided by DRF.

Part 2

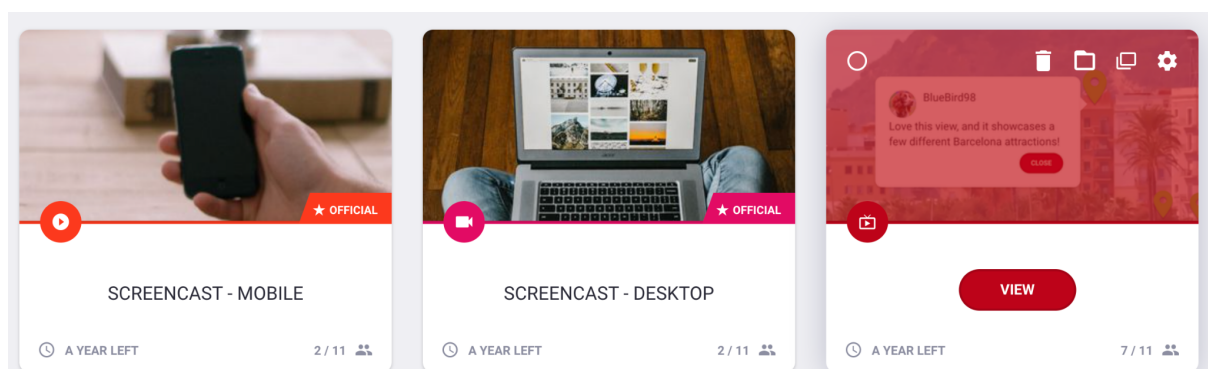
Using you're the data structure from above, we want you to expand the application by creating a simple React frontend which interacts with the API, allowing tiles to be created/edited/removed, and allow tasks to be created/edited/removed within these tiles. Tiles should be filterable by their status and are ordered by their launch dates. Tasks within the tiles should be ordered by their order field. All data fields should be visible. Ignore building in authentication and assume all users have access to view and manipulate these tasks and tiles.

To setup React please use the Create React App package and set it up via yarn, please see <https://create-react-app.dev/docs/getting-started/#yarn>

There is no requirement to use TypeScript in this task.

You may choose to run the React side as a standalone Single Page Application (SPA) or integrate into the Django project itself within a template.

To give you an idea of how we have represented tiles/tasks on our current software, this is what they look like:



You don't need to create a custom design but you may use a shortcut such as cards from bootstrap/material-ui. We do want to be able to flip between the tasks in a tile using simple slider. Don't worry about the image you can just use the tile for the different tasks.

For more information you can see watch our software demo:

<https://incling.com/platform-demo-XX45968/>

Please send a link with github repo to techcareers@incling.com