

# Programming Applications with Databases

## Exercise Set 12

All the exercises below apply to a single selected view (preferably the one being a main view of the application).

1. Introduce a specification pattern into your solution. Create at least 2 specifications.  
[2p]
2. Extend NHibernate repositories (or respective ones) with filtering, sorting and paging functionalities. If possible, apply the specification pattern implemented in the previous exercise, but this is not mandatory.  
[2p]
3. Extend application services to use extended in the previous exercise repositories.  
[2p]
4. Introduce a DTO model in the DDD application layer and ensure it is consumed in the UI. All needed translations implement using Automapper.  
[2p]
5. Introduce explicit presentation model in the UI application and reshape the view to enable basic filtering, paging and sorting based on the results from the previous exercises.  
[2p]

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