

Identify Code Smells in The SharingApp Project

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1. Duplicate Code

1.1. Where does the smell come from?

Classes:

```
public class ItemList extends Observable
public class ContactList extends Observable
```

Methods:

```
public boolean saveItems(Context context)
```

1.2. What is that smell?

The implementation of the method `saveItems(Context context)`, from classes `ItemList` and `ContactList`, are similar and have slight differences, so it's a **duplicate code**.

1.3. What's the problem?

If something needs to change, the code will **need to be updated in multiple places**, what can cause inconsistencies.

1.4. What's the solution?

A storage-like class should be created to perform this kind of action.

2. Data Clumps

2.1. Where does the smell come from?

Classes:

```
public class AddItemActivity extends AppCompatActivity
public class EditItemActivity extends AppCompatActivity implements
Observer
```

1.2. What is that smell?

The classes `AddItemActivity` and `EditItemActivity` have groups of data appearing together in different parts of the code as instance variables, what indicates a **data clumps**.

1.3. What's the problem?

That can cause issues related to **duplicate code**, as well as **reducing readability** and **lack of abstraction**, which in turn can violate the principle of encapsulation and abstraction.

1.4. What's the solution?

Related data items should be grouped together into a **separate class or structure**, rather than being scattered throughout the codebase. By encapsulating related data into a single class, it centralizes the management of that data.