

Collections

List –

We used ArrayList for shift database because it supports the sort method, and it helps us to sort the shifts by date each time they are printed to make it more convenient for the user.

Although the List interface supports duplicates, there is a special and random serial code for each shift and the user cannot make new shifts that passed current date, So there is testing to make sure that we don't have duplicates.

Set-

We used HashSet for employee database because its highly efficient.

Also, HashSet automatically ensures that no duplicate elements are stored and it makes sense because employees can't be duplicated, although we have testing for that as well.

The order of elements in a HashSet is not guaranteed, but it doesn't bother us in our project.

Map-

We used HashMap for user database because HashMap stores data in a key-value pair format, making it simple to find values based on their keys.

It helps us to check user authentication and match the user name to the correct password.