

Chapter 6 Important Notes:

- There are the Java libraries which are having what you need already implemented and it is known as Java API so the Java API is full of code you do not even have to type it but all you need is to learn how to use it
- One of the most important things in the core Java (the API) is to use the array list
- There are a lot of things in the core API which will do tasks for you faster than implementing it from the start by yourself the only thing you need is to learn and do about what is existed inside this core API
- There is difference between the array list and the array the array list is an object so it has methods and attributes and it can change its size dynamically and remove items from it even though the array is object too but the way we deal with it is different than the dealing with the array list object
- In the array list in the declaration you can give no size from the not like the array cause the array list can shrink and extend more flexible
- And when we define the array list we put the type in the `<>` and this called parameterized types and its benefit is to force the compiler to allow only the specific type of objects in the array list
- In the Java API classes are grouped into packages so to use a class in the API you will need to know which package the class is in
- So this statement is very important to be written `import java.util.ArrayList;` cause to can use this class functions that existed inside the array list class you need to call this class to make the compiler can see it and its implemented code but each package included some of the classes inside it so you need too knowing the package of the class to can import this specific class from this specific package so when you run the program the compiler can see its implemented code and can use it easily.
- So the packages having 3 important benefits : it is important for the overall organization , it gives us a name scoping cause if you have more than class with the same name you will need to define your asked class in which package which class you want and the last reason is the level of the security it makes you control the level of details the classes in other packages can see it or no
- There is difference between the import and the include in another languages the include library it go to get the whole library code and store

it in the code to can use it easily but the opposite thing the import cause import here in java is just tells the compiler there is class this is its name and this is its package where it is places just know that cause I will use it in the code but it is actually it does not go and get its whole code and put them in the code which doesn't affect in the speed or the code performance.

- Remember that : If you do not import
You will just have to type
- Go to the Api Docs if you want to search about if there is any thing existed in the Java Api can make what you want directly and be sure that you search in the same java version document as your java version usage